Allied Paper, Inc./Portage Creek/ Kalamazoo River Superfund Site Kalamazoo, Michigan

Final Technical Memorandum 14 Biota Investigation

Appendix F Chain-of-Custody Records

January 2002

Technical Memorandum

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DATA REVIEW FOR

ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER SUPERFUND SITE

SDG# 40734

PCB ANALYSES

TBSA - PHASE II

Analyses performed by:

Aquatec, Inc. Colchester, Vermont

Review performed by:

Blasland, Bouck & Lee, Inc. Syracuse, New York

Summary

The following is an assessment of the PCB data package for SDG # 40734 for the TBSA - Phase II sampling of the Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site. Included with this assessment are the data review check sheets used in the review of the package and sample results for PCB analyses. Analyses were performed on the following samples:

Sample ID	Lab ID	Matrix	Sample Date
K12012	204311	soil	11/10/93
K12013	204312	soil	11/10/93
K12014	204313	soil	11/10/93
K12015	204314	soil	11/10/93
K12016	204315	lios	11/10/93
K12017	204316	soil	11/10/93
K12018	204317	soil	11/10/93
K12019	204318	soil	11/10/93
K12020	204319	soil	11/10/93
K12021	204320	soil	11/10/93
K12022	204321	soil	11/10/93
K12023	204322	rinse blank	11/11/93
K12024	204323	lios	11/11/93
K12025	204324	soil	11/11/93
K12026	204325	soil	11/11/93
K12027	204326	soil	11/11/93
K12028	204327	soil	11/11/93
K12029	204328	soil	11/11/93
K12030	204329	soil	11/11/93
K12033*	204330	soil	11/11/93

MS/MSD performed on this sample

Introduction

Analyses were performed according to the USEPA SW-846 method 8081, modified for PCB only analysis.

The data review process is intended to evaluate the data on a technical basis. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with National Functional Guidelines:

- U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
- J The compound was positively identified; however, the associated numerical value is an estimated concentration only.
- B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.
- N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.
- JN The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.
- E The compound was quantitated above the calibration range.
- D Concentration is based on a diluted sample analysis.
- UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.
- R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant QC problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC test, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

The data presented in the package has been derived using a procedure developed by Aquatec, Inc. in an attempt to improve the analytical process of calibration, identification, and quantitation of PCBs as Aroclors. Key components of this procedure include:

Calibration

The response function of the electron capture detector is inherently non-linear, and while significant linearization is achieved for this detector by electronic means, some non-linearity remains. Power function linearization is used to "straighten the curve" and allow the use of response factors for calibration purposes.

During the initial calibration a response factor is calculated for each peak in the individual Aroclors.

A weighted response factor calculation has been used to adjust for non-linearity at the low end of the calibration curve.

Identification

Peak retention times are relative. Retention times are in set windows relative to the time markers DCB and TCMX. Time markers adjust for minor variations in column flow or instrument condition and allow the use of very tight windows which minimizes the number of both false positive and false negative peak identifications.

The determination of "which Aroclor or mixture of Aroclors will produce a chromatogram most similar to that of the residue" is made by expressing the unknown sample chromatogram as a linear combination of the Aroclors. The "most similar" Aroclor or mixture of Aroclors is determined by using a least squares minimization of the difference between the unknown chromatogram and the linear combination of Aroclors. This is similar to the procedure presented by L.E. Slivon, P.M. Schumacher and A. Alford-Stevens for the determination of Aroclor composition from GC/MS level of chlorination results.

Identification/quantitation of Aroclors in samples is based on the combined response of two columns, typically RTX-5 and RTX-35. The pooling of response combines the unique qualities of both columns to derive a more defined Aroclor pattern which less likely to be affected by interferents. Identification/quantitation data for the individual columns is provided in the package and can be used as a check on the combined column results.

Data Assessment

1. Holding Time

The specified holding times for PCB analyses on soil samples is 10 days from date of sample receipt to extraction and 40 days from extraction to analysis. Sample K12019 was extracted 13 days over the specified holding time and sample K12022-RE was analyzed 17 days over the specified holding time. The data associated with these samples were qualified as estimated. All other samples were extracted and analyzed within the specified holding times.

2. Blank Contamination

Quality assurance blanks, i.e., method, field or rinse blanks, are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Field and rinse blanks measure contamination of samples during field operations.

No target compounds were detected in the method blanks, instrument blanks or rinse blank.

3. System Performance

The system performance was acceptable for both columns.

4. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of giving acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument is giving satisfactory daily performance.

4.1 Initial Calibration

The method allows a maximum RSD of 20%. The %RSD was within acceptable limits for all Aroclors.

4.2 Continuing Calibration

A maximum %D of 15 is allowed. All continuing calibrations were within the specified limits with the following exception:

Instrument HP2087 1/13/94 - 23:19

Aroclor 1248

24.0%

All data in sample K12022-RE have been qualified as estimated.

5. Surrogates / System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique.

Recoveries were below acceptable control limits for one surrogate in samples K12012, K12013, K12015, K12016, K12024, K12025, K12026, K12027, K12028, K12029, K12030, K12033, K12033MS and K12033MSD. No qualifiers were added to these samples based on surrogate performance. Recoveries for sample K12022 were above acceptable control limits for both surrogates; however, no target compounds were detected in the sample and no qualifiers were necessary. All other surrogate recoveries were within acceptable control limits.

6. Compound Identification

The determination of Aroclor presence is made by expressing the unknown sample chromatogram as a linear combination of the Aroclors. The most similar Aroclor or mixture of Aroclors is determined by using a least squares minimization of the difference between the unknown chromatogram and the linear combination of Aroclors.

Identification/quantitation of Aroclors is based on the combined response of the RTX-5 and RTX-35 columns. Identification/quantitation data for the individual columns is provided in the package and has been used as a check on the combined column results.

A review of the sample chromatograms indicate that the Aroclors have been correctly identified/quantitated.

7. Matrix Spike/Matrix Spike Duplicate/Matrix Spike Blank

Matrix spike and matrix spike duplicate data are used to assess the precision and accuracy of the analytical method.

Aroclor 1242 was not recovered in the matrix spike or matrix spike duplicate samples due to interference from the high concentration of Aroclor 1248 present in the sample. Aroclor 1254 matrix spike recoveries were

within acceptable control limits, but the relative percent difference (RPD) between recoveries was above the acceptable control limit. No qualifiers were added to the samples based on these deviation.

8. Field Duplicates

Results for duplicate samples are summarized below:

Sample ID / Duplicate ID	Compound	Sample Result	Duplicate Result	RPD'
K12021 / K12022	ND			

* RPD calculation based on total PCB content

ND Compound not detected, RPD value not applicable.

The samples replicate through non-detection.

9. General Comments

The recommended data usage for sample reanalyses is as follows:

K12022 and K12022-RE

All surrogate recoveries were above control limits in the original analysis of sample K12022. The high recoveries were attributed to evaporative loss due to a defective vial cap. The archived portion of the sample extract was reanalyzed over holding time with acceptable surrogate recoveries. Data from the reanalyzed sample K12022-RE should be used for all compounds.

10. System Performance and Overall Assessment

Overall system performance was acceptable. Other than those deviations specifically mentioned in this review, the overall data quality is within the guidelines listed in the analytical method.



PCB Data Review Checklist

	YES	NO	NA
Data Completeness and Deliverables			
Is there a narrative or cover letter present?	X		
Are the samples numbers included in the narrative?	X		
Are the sample chain-of-custodies present?	X		
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?		X	
Holding Times			
Have any holding times been exceeded?	<u> </u>		
Surrogate Recovery			
Are surrogate recovery forms present?	<u> </u>		
Are all the samples listed on the appropriate surrogate recovery form?	x		
Are the outliers correctly marked with an asterisk?	<u> </u>		
Were recoveries of TCMX or DCB outside of specified limits for any sample or blank?	X		
If yes, were the samples reanalyzed?	X		
Matrix Spikes			
Is there a matrix spike recovery form present?	X		
Were matrix spikes analyzed at the required frequency?	<u> </u>		
How many spike recoveries were outside of QC limits?			
0 out of2			
How many RPDs for matrix spike and matrix spike duplicate were outside of QC limits?			
1 out of1			
Blanks			
is a Method Blank Summary Form present?	<u> </u>		
Has a method blank been analyzed for each set of samples or for each 20 samples, whichever is more frequent?	X		
Has an instrument blank been analyzed at the beginning of each 12 hour period following the initial calibration?	x		

PCB Data Review Checklist - Page 2

	YES	NO	NA
Is the chromatographic performance acceptable for each instrument?	x		
Do any method/reagent/instrument blanks have positive results?		x	
Do any field/rinse blanks have positive results?		X	
Are there field/rinse/equipment blanks associated with every sample?	X		
Calibration and GC Performance			
Are the following chromatograms and data printouts present?			
Aroclor 1016/1260	X		
Aroclor 1221	<u> </u>		
Arocior 1232	X		
Aroclor 1242	X		
Aroclor 1248	X		
Aroclor 1254	X		
Instrument Blanks	X		
Are Initial Calibration Summary Forms present and complete for each column and analytical sequence?	X		
Are the linearity criteria for the initial analyses within limits for both columns (20% RSD)	X		
Have all samples been injected within a 12 hour period beginning with the injection of an instrument blank?	X		
Is a Calibration Verification Summary Form present and complete for each continuing standard analyzed?	×		
Are %D values for all compounds within limits (less than 15%)?		X	
Analytical Sequence Check			
ls a analytical sequence form present and complete for each column and each period of analyses?	X	<u></u>	
Was the proper analytical sequence followed?	X		

PCB Data Review Checklist - Page 3

	YES	NO	NA
Cleanup Efficiency Verification			
If GPC cleanup was performed, is Gel Permeation Chromatography Check Form present?		x	
Are percent recoveries of the compounds used to check the efficiency of the cleanup procedure within QC limits?			x
PCB identification			
Is both a combined and single column Aroclor Identification Report present for every sample?	X		
Do the combined column and individual column Aroclor identifications agree?	X		
Were there any false negatives?		X	
Was GC/MS confirmation provided when required?			×
Compound Quantitation and Reported Detection Li	mits		
Are the reporting limits adjusted to reflect sample dilutions, and for soils, sample moisture?	x		
Chromatogram Quality			
Were the baselines stable?	X		
Were any electronegative displacement (negative peaks) or unusual peaks detected?		X	
Field Duplicates			
Where field duplicates submitted with the samples?	X		

PCB Holding Time and Surrogate Recovery Summary

Sample ID	Holding	Surrogates	- Column 1	Surrogates	- Column 2
	Time	TCX	DCB	тсх	DCB
K12012		↓ (51)		↓ (50)	
K12013		↓ (56)		↓ (55)	
K12014					
K12015		↓ (55)	·	Į (55)	
K12016		↓ (53)		↓ (53)	
K12017					
K12018					
K12019	+13				
K12020					
K12021					
K12022		† (162)	† (158)	† (171)	† (163)
K12022RE	+17				
K12023					
K12024		↓ (50)		↓ (52)	
K12025		↓ (55)		↓ (56)	
K12026		↓ (53)		↓ (53)	
K12027		↓ (47)		↓ (47)	
K12028		↓ (52)		į (52)	
K12029		ļ (46)		↓ (47)	
K12030		↓ (53)		↓ (53)	
K12033		ļ (49)		↓ (49)	
K12033MS		ļ (49)		↓ (49)	
K12033MSD		↓ (45)		↓ (46)	

Surrogate Standards TCX Tetrachloro-m-xylene DCB Decachlorobiphenyl

Qualifiers:

D Surrogates diluted out

Recovery high

1 Recovery low

Unless otherwise noted, all parameters are within specified limits.

PCB Calibration Summary

Instrument: <u>HP2618</u> Column: <u>RTX-35 / RTX-5</u>

Time:	to			12/16	12/16	12/16	12/16
	12/10/93 1816	1444	1520	0112	0147	0851	0926
	initial Cal.	Cont. Cal.	Çont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.
	%ASD	%D	% D	% D	% D	%D	% D
Aroclor 1016	3.9 / 4.4						0.0
Aroclor 1221	4.4 / 4.7						
Arocior 1232	3.0 / 3.3						
Aroclor 1242	3.7 / 4.6						_
Aroclor 1248	3.0 / 3.1	0.5		5.5		5.0	l
Aroclor 1254	2.4 / 2.8		5.5				
Aroclor 1260	3.0 / 2.8				5.5		
Tetrachloro-m-xylene	4.9 / 5.2				- -		
Decachlorobiphenyl	9.3 / 9.9				-		
ffected Samples:							
			-				
-							
}							
-		-					
j						-	
-							
-							

PCB Calibration Summary - Page 2

Instrument: <u>HP2618</u> Column: <u>RTX-35 / RTX-5</u>

Date:		12/16	12/16	12/17	12/17	12/17	12/17
Time:		1628	1704	0140	0215	0546	0622
	Initial Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.
	%RSD	% D	% D	% D	%Đ	% D	%D
Aroclor 1016							
Aroclor 1221							
Aroclor 1232					•		
Arocior 1242			4.0				
Arocior 1248		3.5		4.0		0.5	
Arocior 1254					7.5		
Aroclor 1260							4.5
Tetrachioro-m-xylene							
Decachlorobiphenyl							
Affected Samples:							
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Γ							
F							
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PCB Calibration Summary - Page 3

Instrument: <u>HP2087</u> Column: <u>RTX-35 / RTX-5</u>

Date:	1/8/94 0354	1/13	1/13_	1/13	1/13		
Time:	to 1/9/94 0122	1505	1543	2319	2357		
	Initial Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.
	%RSD	% D	%D	% D	% D	% D	%D
Aroclor 1016	4.4 / 3.2		10.0				
Aroclor 1221	3.9 / 3.0						
Arocior 1232	4.2 / 4.5		<u> </u>				
Aroclor 1242	4.3 / 4.0				11.5		
Arocior 1248	6.2 / 5.5	15.0		24.0			
Arociar 1254	6.2 / 3.9	 					
Arocior 1260	4.1 / 3.9					<u> </u>	
Tetrachioro-m-xylene	3.5 / 10.1						
Decachlorobiphenyl	13.8 / 8.8						
Affected Samples:				K12022- RE			· !
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CORRECTED ANALYSIS SUMMARY FORMS

EPA SAMPLE NO.

Lab Name:	Aquatec, Inc.		Lab Code:	AQUAI	K1:	2012
Contract:	91082	-	Case:	РСВ	SDG:	40734
Phase Type: _	SOIL	_		Lab Sample ID:	20431	1
Phase Weight:	10.0	(g)		Date Received:	11/13/	93
njection Volume:	1.0	(uL)		Date Extracted:	11/17/9	93
Dilution Factor:	5.0			Date Analyzed:	12/16/9	93
% Solids:	69.99	_		Sulfur Clean-up:	N	(Y/N)

CAS NO.	COMPOUND	CONCENTRATION (ug/Kg)	<u> </u>
12674-11-2	Aroclor-1016	360	U
11104-28-2	Aroclor-1221	360	U
11141-16-5	Aroclor-1232	360	U
53469-21-9	Aroclor-1242	360	U
12672-29-6	Aroclor-1248	3300	
11097-69-1	Aroclor-1254	890	
11096-82-5	Arocior-1260	360	U

EPA SAMPLE NO.

Aquatec, Inc. Lab Code: AQUAI SDG: 40734

Lab Sample ID: 204312 Phase Type: SOIL 10.0 Date Received: 11/13/93 Phase Weight: (g) 1.0 Injection Volume: (uL) **Date Extracted:** 11/17/93 5.0 Date Analyzed: 12/16/93 Dilution Factor: 63.25 Sulfur Clean-up: (Y/N) % Solids:

Lab Name:

Contract:

CONCENTRATION CAS NO. **COMPOUND** (ug/Kg) Q 400 12674-11-2 Aroclor-1016 U 11104-28-2 400 U Aroclor-1221 400 U 11141-16-5 Aroclor-1232 53469-21-9 Aroclor-1242 400 U 12672-29-6 3800 Aroclor-1248 11097-69-1 1900 Aroclor-1254 11096-82-5 400 U Aroclor-1260

EPA SAMPLE NO. K12014 Lab Name: Aquatec, inc. Lab Code: AQUAI 91082 PCB SDG: 40734 Contract: Case: Phase Type: SOIL Lab Sample ID: 204313 10.0 **Date Received:** 11/13/93 Phase Weight: **(g)** Injection Volume: 1.0 **Date Extracted:** 11/17/93 (uL) Dilution Factor: 5.0 Date Analyzed: 12/16/93 % Solids: 66.50 Sulfur Clean-up: N (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (ug/Kg)	C
12674-11-2	Aroclor-1016	380	U
11104-28-2	Aroclor-1221	380	U
11141-16-5	Aroclor-1232	380	U
53469-21-9	Aroclor-1242	380	U
12672-29-6	Aroclor-1248	2900	
11097-69-1	Aroclor-1254	1100	
11096-82-5	Aroclor-1260	260	J

EPA SAMPLE NO. K12015 AQUAI Lab Name: Aquatec, inc. Lab Code: SDG: 91082 PCB 40734 Contract: Case: Phase Type: SOIL Lab Sample ID: 204314 10.0 Date Received: Phase Weight: 11/13/93 (g) Date Extracted: Injection Volume: 1.0 (uL) 11/17/93 Date Analyzed: Dilution Factor: 10.0 12/16/93 % Solids: 57.89 Sulfur Clean-up: N (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (ug/Kg)	a
12674-11-2	Arocior-1016	870	U
11104-28-2	Aroclor-1221	870	υ
11141-16-5	Aroclor-1232	870	υ
53469-21-9	Aroclor-1242	870	U
12672-29-6	Aroclor-1248	8700	
11097-69-1	Aroclor-1254	1500	
11096-82-5	Aroclor-1260	870	U

EPA SAMPLE NO. K12016 Lab Name: Aquatec, Inc. Lab Code: IAUDA PCB SDG: Contract: 91082 Case: 40734 Phase Type: SOIL Lab Sample ID: 204315 Phase Weight: 10.0 Date Received: 11/13/93 **(g)** Injection Volume: 1.0 (uL) Date Extracted: 11/17/93 Dilution Factor: 5.0 Date Analyzed: 12/16/93 % Solids: 49.87 Sulfur Clean-up: N

CAS NO.	COMPOUND	CONCENTRATION (ug/Kg)	
12674-11-2	Aroclor-1016	510	ι
11104-28-2	Aroclor-1221	510	ί
11141-16-5	Aroclor-1232	510	l
53469-21-9	Aroclor-1242	510	l
12672-29-6	Aroclor-1248	6400	
11097-69-1	Aroclor-1254	1100	
11096-82-5	Aroclor-1260	700	

(Y/N)

EPA SAMPLE NO.

K12017

Lab Name: Aquatec, Inc. Lab Code: AQUAI

Contract: 91082 Case: PCB SDG: 40734

Lab Sample ID: 204316 Phase Type: SOIL Phase Weight: Date Received: 10.0 11/13/93 (g) Injection Volume: 1.0 Date Extracted: 11/17/93 (uL) 1.0 12/16/93 Dilution Factor: Date Analyzed:

% Solids: 34.37 Sulfur Clean-up: N (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (ug/Kg)	
12674-11-2	Aroclor-1016	150	{
11104-28-2	Aroclor-1221	150	1
11141-16-5	Aroclor-1232	150	Į
53469-21-9	Aroclor-1242	150	(
12672-29-6	Aroclor-1248	220	
11097-69-1	Aroclor-1254	61	•
11096-82-5	Aroclor-1260	150	į

Lab Code:

Case:

AQUAI PCB

Lab Name: Aquatec, Inc.

Contract:

91082

K12018
SDG: 40734

EPA SAMPLE NO.

Phase Type: SOIL Lab Sample ID: 204317 Phase Weight: 10.0 Date Received: 11/13/93 **(g)** Injection Volume: 1.0 (uL) **Date Extracted:** 11/17/93 **Dilution Factor:** 1.0 Date Analyzed: 12/16/93 % Solids: 36.96 Sulfur Clean-up: N (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (ug/Kg)	<u> 0</u>
12674-11-2	Aroclor-1016	140	U
11104-28-2	Aroclor-1221	140	U
11141-16-5	Aroclor-1232	140	U
53469-21-9	Aroclor-1242	140	U
12672-29-6	Aroclor-1248	140	U
11097-69-1	Aroclor-1254	140	U
11096-82-5	Aroclor-1260	140	U

EPA SAMPLE NO. K12019 Lab Code: **AQUAI** Lab Name: Aquatec, Inc. SDG: __ 40734 91082 PCB Contract: Case: Lab Sample ID: 204318 SOIL Phase Type: 10.0 Date Received: 11/13/93 Phase Weight: (g) 12/06/93 Injection Volume: 1.0 Date Extracted: (uL) 1.0 12/16/93 Date Analyzed: Dilution Factor: 42.11 Sulfur Clean-up: N (Y/N) % Solids:

CAS NO.	COMPOUND	CONCENTRATION (ug/Kg)	a
12674-11-2	Aroclor-1016	120	U T
11104-28-2	Aroclor-1221	120	U
11141-16-5	Aroclor-1232	120	U I
53469-21-9	Aroclor-1242	120	U.
12672-29-6	Aroclor-1248	390	
11097-69-1	Aroclor-1254	120	U.
11096-82-5	Aroclor-1260	120	U

EPA SAMPLE NO.

K12020

SDG: 40734

Lab Sample ID: Phase Type: SOIL 204319 Date Received: 10.0 11/13/93 Phase Weight: (g) Date Extracted: 11/17/93 Injection Volume: 1.0 (uL) Dilution Factor: 1.0 Date Analyzed: 12/16/93 % Solids: 46.31 Sulfur Clean-up: Ν (Y/N)

Lab Code:

Case:

AQUAI

PCB

Lab Name:

Contract:

Aquatec, Inc.

91082

CAS NO.	COMPOUND	CONCENTRATION (ug/Kg)	
12674-11-2	Aroclor-1016	110	ι
11104-28-2	Aroclor-1221	110	ī
11141-16-5	Aroclor-1232	110	J
53469-21-9	Aroclor-1242	110	Į
12672-29-6	Aroclor-1248	110	l
11097-69-1	Aroclor-1254	110	į
11096-82-5	Aroclor-1260	110	ī

EPA SAMPLE NO.

				Г	EFA SAMF	
Lab Name: _	Aquatec, Inc.		Lab Code:	AQUAI	K1202	
Contract: _	91082	_	Case:	РСВ	SDG:4	0734
Phase Type: _	SOIL	_		Lab Sample ID:	204320	
Phase Weight:	10.0	(g)		Date Received:	11/13/93	
Injection Volume:	1.0	(uL)		Date Extracted: _	11/17/93	_
Dilution Factor:	1.0	_		Date Analyzed: _	12/16/93	_
% Solids:	49.13			Sulfur Clean-up:	N	(Y/N)

CAS NO.	COMPOUND	CONCENTRATION (ug/Kg)	Q
12674-11-2	Aroclor-1016	110	U
11104-28-2	Aroclor-1221	110	U
11141-16-5	Aroclor-1232	110	U
53469-21-9	Aroclor-1242	110	U
12672-29-6	Aroclor-1248	110	U
11097-69-1	Aroclor-1254	110	U
11096-82-5	Aroclor-1260	110	U

EPA SAMPLE NO.

 Lab Name:
 Aquatec, Inc.
 Lab Code:
 AQUAI

 Contract:
 91082
 Case:
 PCB
 SDG:
 40734

Lab Sample ID: SOIL 204321R1 Phase Type: 10.0 Date Received: Phase Weight: (g) 11/13/93 Injection Volume: 1.0 (uL) Date Extracted: 11/17/93 1.0 01/13/94 Dilution Factor: _ Date Analyzed: 50.47 Sulfur Clean-up: % Solids: N (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (ug/Kg)	Q
12674-11-2	Aroclor-1016	100	_ U:;
11104-28-2	Aroclor-1221	100	U
11141-16-5	Aroclor-1232	100	_ U :
53469-21-9	Aroclor-1242	100	U:
12672-29-6	Aroclor-1248	100	U,
11097-69-1	Aroclor-1254	100	υŢ
11096-82-5	Aroclor-1260	100	U

EPA SAMPLE NO.

K12023 Lab Name: Aquatec, Inc. Lab Code: AQUAI Contract: 91082 Case: **PCB** SDG: 40734 Phase Type: Water Lab Sample ID: 204322 Phase Volume: 1005 (mL) **Date Received:** 11/13/93 Injection Volume: 1.0 (uL) **Date Extracted:** 11/18/93 Dilution Factor: 1.0 Date Analyzed: 12/16/93 Sulfur Clean-up: N (Y/N)

CAS NO.	COMPOUND	CONCENTRATION	
		(ug/L)	
12674-11-2	Aroclor-1016	0.050	(
11104-28-2	Aroclor-1221	0.050	
11141-16-5	Aroclor-1232	0.050	
53469-21-9	Aroclor-1242	0.050	
12672-29-6	Aroclor-1248	0.050	
11097-69-1	Aroclor-1254	0.050	
11096-82-5	Aroclor-1260	0.050	

EPA SAMPLE NO.

K12024

Lab Name: Aquatec, Inc. Lab Code: AQUAI

Contract: 91082 Case: PCB SDG: 40734

Lab Sample ID: Phase Type: SOIL 204323 Phase Weight: 10.0 **Date Received:** 11/13/93 (g) Injection Volume: 1.0 Date Extracted: 11/17/93 (uL) Dilution Factor: 20.0 Date Analyzed: 12/15/93 % Solids: 56.46 Sulfur Clean-up: N (Y/N)

> CAS NO. COMPOUND CONCENTRATION Q (ug/Kg) 12674-11-2 Aroclor-1016 1800 U 11104-28-2 Aroclor-1221 1800 U 11141-16-5 Aroclor-1232 1800 U 53469-21-9 Aroclor-1242 1800 U 12672-29-6 Aroclor-1248 19000 11097-69-1 Aroclor-1254 3700 11096-82-5 Aroclor-1260 1800

EPA SAMPLE NO. K12025 Lab Name: Aquatec, Inc. Lab Code: AQUAL Contract: 91082 Case: **PCB** SDG: 40734 Phase Type: SOIL Lab Sample ID: 204324 Phase Weight: 10.0 **(g) Date Received:** 11/13/93 Injection Volume: 1.0 (uL) Date Extracted: 11/17/93 Dilution Factor: 30.0 Date Analyzed: 12/15/93 % Solids: 57.00 Sulfur Clean-up: N (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (ug/Kg)	
12674-11-2	Aroclor-1016	2700	ι
11104-28-2	Aroclor-1221	2700	ī
11141-16-5	Aroclor-1232	2700	ι
53469-21-9	Aroclor-1242	2700	l
12672-29-6	Aroclor-1248	31000	
11097-69-1	Aroclor-1254	2700	ι
11096-82-5	Aroclor-1260	3500	

EPA SAMPLE NO.

K12026 Lab Code: **AQUAI** Lab Name: Aquatec, Inc. Contract: 91082 Case: **PCB** SDG: 40734 Phase Type: SOIL Lab Sample ID: 204325 Phase Weight: 10.0 **(g) Date Received:** 11/13/93 Injection Volume: 1.0 (uL) **Date Extracted:** 11/17/93

Dilution Factor:

% Solids:

20.0

56.39

Sulfur Clean-up: N (Y/N)

12/15/93

Date Analyzed:

CAS NO. **COMPOUND** CONCENTRATION (ug/Kg) a 12674-11-2 Aroclor-1016 1800 U 11104-28-2 Aroclor-1221 1800 U 11141-16-5 Aroclor-1232 1800 U 53469-21-9 Aroclor-1242 1800 U 12672-29-6 Aroclor-1248 21000 11097-69-1 Aroclor-1254 1800 11096-82-5 2200 Aroclor-1260

EPA SAMPLE NO.

K12027

 Lab Name:
 Aquatec, Inc.
 Lab Code:
 AQUAI

 Contract:
 91082
 Case:
 PCB
 SDG:
 40734

Lab Sample ID: 204326 Phase Type: SOIL Phase Weight: 10.0 **Date Received:** 11/13/93 (g) Injection Volume: 1.0 (uL) **Date Extracted:** 11/17/93 Dilution Factor: 20.0 Date Analyzed: 12/15/93 56.73 % Solids: Sulfur Clean-up: Ν (Y/N)

CAS NO.	COMPOUND	CONCENTRATION	
		(ug/Kg)	
12674-11-2	Aroclor-1016	1800	U
11104-28-2	Aroclor-1221	1800	U
11141-16-5	Aroclor-1232	1800	U
53469-21-9	Aroclor-1242	1800	U
12672-29-6	Aroclor-1248	20000	
11097-69-1	Aroclor-1254	2500	
11096-82-5	Aroclor-1260	1700	J

EPA SAMPLE NO. K12028 Lab Name: Aquatec, Inc. Lab Code: **AQUAI** 91082 PCB Contract: Case: SDG: 40734 SOIL Lab Sample ID: 204327 Phase Type: 10.0 Phase Weight: **Date Received:** 11/13/93 **(g)** 11/17/93 1.0 Date Extracted: Injection Volume: (uL) Dilution Factor: 20.0 Date Analyzed: 12/16/93 % Solids: 56.44 Sulfur Clean-up: N (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (ug/Kg)	
12674-11-2	Aroclor-1016	1800	ι
11104-28-2	Aroclor-1221	1800	ī
11141-16-5	Aroclor-1232	1800	ι
53469-21-9	Aroclor-1242	1800	į
12672-29-6	Aroclor-1248	25000	
11097-69-1	Aroclor-1254	1800	· į
11096-82-5	Aroclor-1260	2700	

EPA SAMPLE NO.

K12029 Lab Code: IAUDA Lab Name: Aquatec, Inc. 91082 Case: PCB SDG: 40734 Contract: Phase Type: SOIL Lab Sample ID: 204328 Phase Weight: 10.0 **(g) Date Received:** 11/13/93 1.0 Date Extracted: 11/17/93 Injection Volume: (uL) 20.0 12/16/93 Dilution Factor: Date Analyzed: % Solids: 50.70 Sulfur Clean-up: N (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (ug/Kg)	
12674-11-2	Aroclor-1016	2000	ι
11104-28-2	Aroclor-1221	2000	ι
11141-16-5	Aroclor-1232	2000	ι
53469-21-9	Aroclor-1242	2000	l
12672-29-6	Aroclor-1248	17000	
11097-69-1	Aroclor-1254	3800	
11096-82-5	Aroclor-1260	2000	ι

EPA SAMPLE NO.

K12030 Lab Code: Lab Name: Aquatec, Inc. AQUAI 91082 PCB Case: SDG: 40734 Contract: SOIL Phase Type: Lab Sample ID: 204329 10.0 11/13/93 Phase Weight: (g) Date Received: 11/17/93 1.0 (uL) Injection Volume: Date Extracted: Dilution Factor: 30.0 Date Analyzed: 12/16/93 % Solids: 52.39 Sulfur Clean-up: Ν (Y/N)

CAS NO.	COMPOUND	CONCENTRATION	
		(ug/Kg)	
12674-11-2	Aroclor-1016	2900	1
11104-28-2	Aroclor-1221	2900	
11141-16-5	Aroclor-1232	2900	
53469-21-9	Aroclor-1242	2900	
12672-29-6	Aroclor-1248	30000	
11097-69-1	Aroclor-1254	2900	
11096-82-5	Aroclor-1260	2600	

EPA SAMPLE NO.

K12033 Lab Code: Lab Name: Aquatec, Inc. AQUAI 91082 **PCB** SDG: 40734 Case: Contract: SOIL Lab Sample ID: 204330 Phase Type: 10.0 Date Received: 11/13/93 Phase Weight: (g) Injection Volume: 1.0 (uL) **Date Extracted:** 11/17/93 12/16/93 20.0 Dilution Factor: Date Analyzed: % Solids: 54.00 Sulfur Clean-up: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION (ug/Kg)	
12674-11-2	Aroclor-1016	1900	Ų
11104-28-2	Arocior-1221	1900	l
11141-16-5	Aroclor-1232	1900	l
53469-21-9	Aroclor-1242	1900	Ţ
12672-29-6	Aroclor-1248	16000	
11097-69-1	Aroclor-1254	2700	
11096-82-5	Aroclor-1260	1700	

DATA REVIEW FOR

ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER SUPERFUND SITE

SDG# 40738

PCB ANALYSES

TBSA - PHASE II

Analyses performed by:

Aquatec, Inc. Colchester, Vermont

Review performed by:

Blasland, Bouck & Lee, Inc. Syracuse, New York

Summary

The following is an assessment of the PCB data package for SDG # 40738 for the TBSA - Phase II sampling of the Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site. Included with this assessment are the data review check sheets used in the review of the package and sample results for PCB analyses. Analyses were performed on the following samples:

Sample ID	Lab ID	Matrix	Sample Date
K12031	204335	soil	11/11/93
K12032	204336	soil	11/11/93
K12034	204337	soil	11/11/93
K12035	204338	rinse blank	11/12/93
K12036	204339	soil	11/12/93
K12037*	204340	soil	11/12/93
K12038	204342	soil	11/12/93
K12039	204343	soil	11/12/93
K12040	204344	soil	11/12/93
K12041	204345	soil	11/12/93

^{*} MS/MSD performed on this sample

Introduction

Analyses were performed according to the USEPA SW-846 method 8081, modified for PCB only analysis.

The data review process is intended to evaluate the data on a technical basis. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with National Functional Guidelines:

- U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
- J The compound was positively identified; however, the associated numerical value is an estimated concentration only.
- B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.
- N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.
- JN The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.
- E The compound was quantitated above the calibration range.
- D Concentration is based on a diluted sample analysis.
- UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.
- R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant QC problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC test, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

The data presented in the package has been derived using a procedure developed by Aquatec, Inc. in an attempt to improve the analytical process of calibration, identification, and quantitation of PCBs as Aroclors. Key components of this procedure include:

Calibration

The response function of the electron capture detector is inherently non-linear, and while significant linearization is achieved for this detector by electronic means, some non-linearity remains. Power function linearization is used to "straighten the curve" and allow the use of response factors for calibration purposes.

During the initial calibration a response factor is calculated for each peak in the individual Aroclors.

A weighted response factor calculation has been used to adjust for non-linearity at the low end of the calibration curve.

<u>Identification</u>

Peak retention times are relative. Retention times are in set windows relative to the time markers DCB and TCMX. Time markers adjust for minor variations in column flow or instrument condition and allow the use of very tight windows which minimizes the number of both false positive and false negative peak identifications.

The determination of "which Aroclor or mixture of Aroclors will produce a chromatogram most similar to that of the residue" is made by expressing the unknown sample chromatogram as a linear combination of the Aroclors. The "most similar" Aroclor or mixture of Aroclors is determined by using a least squares minimization of the difference between the unknown chromatogram and the linear combination of Aroclors. This is similar to the procedure presented by L.E. Slivon, P.M. Schumacher and A. Alford-Stevens for the determination of Aroclor composition from GC/MS level of chlorination results.

Identification/quantitation of Aroclors in samples is based on the combined response of two columns, typically RTX-5 and RTX-35. The pooling of response combines the unique qualities of both columns to derive a more defined Aroclor pattern which less likely to be affected by interferents. Identification/quantitation data for the individual columns is provided in the package and can be used as a check on the combined column results.

Data Assessment

1. Holding Time

The specified holding times for PCB analyses on soil samples is 10 days from date of sample receipt to extraction and 40 days from extraction to analysis. All samples were originally extracted and analyzed within the specified holding times. The re-extraction of sample K12038 was performed 29 days over the specified holding time. The data for the re-extraction have been qualified as estimated.

2. Blank Contamination

Quality assurance blanks, i.e., method, field or rinse blanks, are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Field and rinse blanks measure contamination of samples during field operations.

No target compounds were detected in the method blanks, instrument blanks or rinse blank.

3. System Performance

The system performance was acceptable for both columns.

4. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of giving acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument is giving satisfactory daily performance.

4.1 Initial Calibration

The method allows a maximum RSD of 20%. The %RSD was within acceptable limits for all Aroclors.

4.2 Continuing Calibration

A maximum %D of 15 is allowed. All continuing calibrations were within the specified limits.

5. Surrogates / System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique.

Recovery was below 10 percent for one surrogate in sample K12038. All identified compounds have been qualified as estimated and all non-detected compounds have been rejected in this sample. All other surrogate recoveries were within acceptable control limits.

6. Compound Identification

The determination of Aroclor presence is made by expressing the unknown sample chromatogram as a linear combination of the Aroclors. The most similar Aroclor or mixture of Aroclors is determined by using a least squares minimization of the difference between the unknown chromatogram and the linear combination of Aroclors.

Identification/quantitation of Aroclors is based on the combined response of the RTX-5 and RTX-35 columns. Identification/quantitation data for the individual columns is provided in the package and has been used as a check on the combined column results.

A review of the sample chromatograms indicate that the Aroclors have been correctly identified/quantitated.

7. Matrix Spike/Matrix Spike Duplicate/Matrix Spike Blank

Matrix spike and matrix spike duplicate data are used to assess the precision and accuracy of the analytical method.

All matrix spike and matrix spike duplicate recoveries and the relative percent differences (RPDs) between recoveries were within acceptable control limits.

8. Field Duplicates

Results for duplicate samples are summarized below:

Sample ID / Duplicate ID	Compound	Sample Result	Duplicate Result	RPD*
K12031 / K12032	Aroclor 1248	21000	20000	2.6%
	Aroclor 1254	5800	4800	
	Aroclor 1260	••	1500	
K12040 / K12041	Aroclor 1254	65	77	16.9%

* RPD calculation based on total PCB content

The RPD values are within USEPA Region 5 guidance limits.

9. General Comments

The recommended data usage for the sample reanalysis is as follows:

K12038 and K12038-RE

The original analysis of sample K12038 had one surrogate recovery below 10 percent, resulting in the rejection of non-detect data. The reanalyzed of the sample, K12038-RE, had all surrogate recoveries within acceptable control limits. The data from the reanalysis, K12038-RE, should be used for all compounds.

10. System Performance and Overall Assessment

Overall system performance was acceptable. Other than those deviations specifically mentioned in this review, the overall data quality is within the guidelines listed in the analytical method.

DATA REVIEW CHECKLIST

PCB Data Review Checklist

	YES	NO	NA
Data Completeness and Deliverables			
Is there a narrative or cover letter present?	X		
Are the samples numbers included in the narrative?	X		
Are the sample chain-of-custodies present?	<u> </u>		
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?		<u> x</u>	
Holding Times			
Have any holding times been exceeded?	X		
Surrogate Recovery			
Are surrogate recovery forms present?	X		
Are all the samples listed on the appropriate surrogate recovery form?	<u>X</u>		************
Are the outliers correctly marked with an asterisk?	X		
Were recoveries of TCMX or DCB outside of specified limits for any sample or blank?	<u> </u>	<u></u>	
If yes, were the samples reanalyzed?	X		
Matrix Spikes			
Is there a matrix spike recovery form present?	X		
Were matrix spikes analyzed at the required frequency?	X		
How many spike recoveries were outside of QC limits?			
O out of4			
How many RPDs for matrix spike and matrix spike duplicate were outside of QC limits?			
_0 out of _2_			
<u>Blanks</u>			
Is a Method Blank Summary Form present?	X	-	
Has a method blank been analyzed for each set of samples or for each 20 samples, whichever is more frequent?	X		
Has an instrument blank been analyzed at the beginning of each 12 hour period following the initial calibration?	×		

PCB Data Review Checklist - Page 2

	YES	NO	NA
Is the chromatographic performance acceptable for each instrument?	<u>x</u>		
Do any method/reagent/instrument blanks have positive results?		X	
Do any field/rinse blanks have positive results?		X	
Are there field/rinse/equipment blanks associated with every sample?	X		
Calibration and GC Performance			
Are the following chromatograms and data printouts present?			
Aroclor 1016/1260	<u> x</u>		
Aroclor 1221	<u> </u>		
Aroclor 1232	X		
Aroclor 1242	X		
Aroclor 1248	Х		*************
Aroclor 1254	X		
instrument Blanks	X		
Are Initial Calibration Summary Forms present and complete for each column and analytical sequence?	X		
Are the linearity criteria for the initial analyses within limits for both columns (20% RSD)	x		
Have all samples been injected within a 12 hour period beginning with the injection of an instrument blank?	X		
Is a Calibration Verification Summary Form present and complete for each continuing standard analyzed?	X		
Are %D values for all compounds within limits (less than 15%)?	X		
Analytical Sequence Check			•
Is a analytical sequence form present and complete for each column and each period of analyses?	x		-
Was the proper analytical sequence followed?	Х		

PCB Data Review Checklist - Page 3

	YES	NO	NA
Cleanup Efficiency Verification			
If GPC cleanup was performed, is Gel Permeation Chromatography Check Form present?		X	
Are percent recoveries of the compounds used to check the efficiency of the cleanup procedure within QC limits?			X
PCB Identification	 _		
Is both a combined and single column Aroclor Identification Report present for every sample?	X		
Do the combined column and individual column Aroclor identifications agree?	X		
Were there any false negatives?		X	
Was GC/MS confirmation provided when required?			x
Compound Quantitation and Reported Detection Li	mits		
Are the reporting limits adjusted to reflect sample dilutions, and for soils, sample moisture?	X		
Chromatogram Quality			
Were the baselines stable?	X		
Were any electronegative displacement (negative peaks) or unusual peaks detected?		X	
Field Duplicates			
Where field duplicates submitted with the samples?	X		

PCB Holding Time and Surrogate Recovery Summary

Sample ID	Holding	Surrogates	- Column 1	Surrogates	- Column 2
	Time	тсх	DCB	TCX	DCB
K12031			ок		ок
K12032				_	
K12034					
K12035					
K12036	·				
K12037	-				
K12037MS					
K12037MSD					
K12038		↓ (4)		↓ (4)	
K12038RE	+ 29				
K12039					
K12040					
K12041					
				<u></u>	
				-	
					····································
				······································	
					

Surrogate Standards TCX Tetrachloro-m-xylene DCB Decachlorobiphenyl Qualifiers:

D Surrogates diluted out

† Recovery high

Recovery low

Unless otherwise noted, all parameters are within specified limits.

PCB Calibration Summary

Instrument: <u>HP2618</u> Column: <u>RTX-35 / RTX-5</u>

Date:	12/9/93 2218	12/15	12/15	12/15	12/15	12/15	12/15
Time:	to 12/10/93 1816	0223	0258	1001	1037	1444	1520
	initial Cal.	Cont. Cal	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.
	%RSD	%D	% D	% D	%D	% D	% D
Aroclor 1016	3.9 / 4.4		2.0		······		
Arocior 1221	4.4 / 4.7						
Aroclor 1232	3.0 / 3.3						
Arocior 1242	3.7 / 4.6				0.0		
Aroclor 1248	3.0 / 3.1	2.5		1.5		0.5	
Aroclor 1254	2.4 / 2.8						5.5
Aroclor 1260	3.0 / 2.8						
Tetrachloro-m-xylene	4.9 / 5.2						
Decachlorobiphenyl	9.3 / 9.9						
Affected Samples:							
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PCB Calibration Summary - Page 2

Instrument: <u>HP2087</u> Column: <u>RTX-35 / RTX-5</u>

Date:	1/8/94 0354	1/13	1/13	1/13	1/13		
Time:	to 1/9/94 0122	0652	0730	1505	1543		
	initial Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.
	%RSD	% D	% D	%D	% D	%D	%D
Aroclor 1016	4.4 / 3.2				10.0		
Aroclor 1221	3.9 / 3.0				<u> </u>		
Aroclor 1232	4.2 / 4.5						
Aroclor 1242	4.3 / 4.0						
Arocior 1248	6.2 / 5.5	12.5		15.0			
Aroclor 1254	6.2 / 3.9						
Arocior 1260	4.1 / 3.9		7.0				
Tetrachloro-m-xylene	3.5 / 10.1						
Decachlorobiphenyl	13.8 / 8.8						
Affected Samples:							
							_
Γ							
Γ							

CORRECTED ANALYSIS SUMMARY FORMS

Lab Code:

Case: _

Lab Name: Aquatec, Inc.

91082

Contract:

K12031

AQUAI

PCB SDG: 40738

Lab Sample ID: 204335

EPA SAMPLE NO.

Phase Type: SOIL Phase Weight: 10.1 (g) Date Received: 11/13/93 Injection Volume: 1.0 (uL) **Date Extracted:** 11/17/93 Dilution Factor: 30.0 Date Analyzed: 12/15/93 % Solids: 54.80 Sulfur Clean-up: Ν (Y/N)

> CAS NO. **COMPOUND** CONCENTRATION (ug/Kg) Q Aroclor-1016 2800 12674-11-2 U 11104-28-2 Aroclor-1221 2800 U Aroclor-1232 2800 U 11141-16-5 53469-21-9 Aroclor-1242 2800 U 12672-29-6 Aroclor-1248 21000 11097-69-1 Arocior-1254 5800 11096-82-5 Aroclor-1260 2800 U

EPA SAMPLE NO. K12032 Lab Name: Aquatec, Inc. Lab Code: AQUAI 91082 Contract: Case: PCB SDG: _ 40738 SOIL Phase Type: Lab Sample ID: 204336 Phase Weight: 10.0 (g) Date Received: 11/13/93 Injection Volume: 1.0 (uL) Date Extracted: 11/17/93 Dilution Factor: 30.0 Date Analyzed: 12/15/93 % Solids: 54.68 Sulfur Clean-up: N (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (ug/Kg)	C
12674-11-2	Aroclor-1016	2800	ι
11104-28-2	Aroclor-1221	2800	l
11141-16-5	Aroclor-1232	2800	į
53469-21-9	Aroclor-1242	2800	ī
12672-29-6	Aroclor-1248	20000	_
11097-69-1	Aroclor-1254	4600	
11096-82-5	Aroclor-1260	1500	J

EPA SAMPLE NO.

Lab Name: Aquatec, Inc. Lab Code: AQUAI

Contract: 91082 Case: PCB SDG: 40738

Phase Type: SOIL Lab Sample ID: 204337 Phase Weight: Date Received: 10.1 (g) 11/13/93 Injection Volume: 1.0 (uL) Date Extracted: 11/17/93 30.0 Dilution Factor: 12/15/93 Date Analyzed: 54.41 Sulfur Clean-up: N % Solids: (Y/N)

> CAS NO. CONCENTRATION **COMPOUND** (ug/Kg) a 12674-11-2 Aroclor-1016 2800 U 2800 U 11104-28-2 Arocior-1221 11141-16-5 2800 Aroclor-1232 U 53469-21-9 Aroclor-1242 2800 U 12672-29-6 Aroclor-1248 15000 11097-69-1 Aroclor-1254 5200 11096-82-5 Aroclor-1260 1300 J

EPA SAMPLE NO. K12035 Lab Code: Lab Name: Aquatec, Inc. AQUAI 91082 PCB SDG: Contract: Case: 40738 Water Lab Sample ID: 204338 Phase Type: Phase Volume: 1000 (mL) **Date Received:** 11/13/93 Injection Volume: _ 1.0 (uL) Date Extracted: 11/18/93 Dilution Factor: 1.0 Date Analyzed: 12/15/93 Sulfur Clean-up: N (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	C
		(09/L)	
12674-11-2	Aroclor-1016	0.050	ι
11104-28-2	Aroclor-1221	0.050	Į
11141-16-5	Aroclor-1232	0.050	U
53469-21-9	Aroclor-1242	0.050	ι
12672-29-6	Aroclor-1248	0.050	ī
11097-69-1	Aroclor-1254	0.050	ι
11096-82-5	Aroclor-1260	0.050	l

EPA SAMPLE NO. K12036 Lab Name: Aquatec, Inc. Lab Code: **AQUAI** 91082 Case: PCB SDG: 40738 Contract: SOIL 204339 Phase Type: Lab Sample ID: Phase Weight: 10.0 **Date Received:** (g) 11/13/93 Injection Volume: 1.0 (uL) Date Extracted: 11/17/93 Dilution Factor: 1.0 Date Analyzed: 12/15/93 % Solids: 66.46 Sulfur Clean-up: Ν (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (ug/Kg)	
12674-11-2	Aroclor-1016	76	ι
11104-28-2	Aroclor-1221	76	ι
11141-16-5	Aroclor-1232	76	ī
53469-21-9	Aroclor-1242	76	Į
12672-29-6	Aroclor-1248	51	
11097-69-1	Aroclor-1254	61	J
11096-82-5	Aroclor-1260	34	

EPA SAMPLE NO. K12037 Lab Name: Aquatec, Inc. Lab Code: AQUAI Case: Contract: 91082 PCB SDG: _ 40738 SOIL Phase Type: Lab Sample ID: 204340 Phase Weight: 10.0 Date Received: **(g)** 11/13/93 Injection Volume: 1.0 (uL) Date Extracted: 11/17/93 **Dilution Factor:** 1.0 Date Analyzed: 12/15/93 % Solids: 66.97 Sulfur Clean-up: N (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (ug/Kg)	
12674-11-2	Aroclor-1016	75	ι
11104-28-2	Aroclor-1221	75	ι
11141-16-5	Aroclor-1232	75	l
53469-21-9	Aroclor-1242	75	i
12672-29-6	Aroclor-1248	75	ι
11097-69-1	Aroclor-1254	200	
11096-82-5	Aroclor-1260	75	ī

EPA SAMPLE NO. K12038₽€ Lab Code: Lab Name: **AQUAI** Aquatec, Inc. 91082 Case: **PCB** SDG: 40738 Contract: Phase Type: SOIL Lab Sample ID: 204342R1 Phase Weight: 10.0 Date Received: 11/13/93 (g) Injection Volume: 1.0 (uL) 12/22/93 Date Extracted: 1.0 Dilution Factor: Date Analyzed: 01/13/94

67.43

% Solids:

CAS NO.	COMPOUND	CONCENTRATION (ug/Kg)	Q
12674-11-2	Aroclor-1016	75	כט
11104-28-2	Aroclor-1221	75	UI
11141-16-5	Aroclor-1232	75	U
53469-21-9	Aroclor-1242	45	J
12672-29-6	Aroclor-1248	75	Ų (
11097-69-1	Aroclor-1254	93	~
11096-82-5	Aroclor-1260	33	J

Sulfur Clean-up:

N

(Y/N)

Lab Name: Aquatec, Inc.

Contract:

Phase Type:

Phase Weight:

Dilution Factor:

% Solids:

Injection Volume:

91082

SOIL

10.0

1.0

1.0

64.74

(g)

(uL)

EPA SAMPLE NO.

K12039

Lab Code: AQUAI

Case: PCB SDG: 40738

Lab Sample ID: 204343

Date Received: 11/13/93

Date Extracted: 11/17/93

Date Analyzed:

Sulfur Clean-up:

12/15/93

Ν

(Y/N)

CAS NO.	COMPOUND	CONCENTRATION (ug/Kg)	
			<u> </u>
12674-11-2	Aroclor-1016	78	<u> </u>
11104-28-2	Aroclor-1221	78	U
11141-16-5	Aroclor-1232	78	U
53469-21-9	Aroclor-1242	78	U
12672-29-6	Aroclor-1248	78	U
11097-69-1	Aroclor-1254	170	
11096-82-5	Aroclor-1260	32	J

EPA SAMPLE NO. K12040 Lab Name: Aquatec, Inc. Lab Code: AQUAI 40738 Contract: 91082 Case: PCB SDG: Phase Type: SOIL Lab Sample ID: 204344 Phase Weight: 10.1 **(g)** Date Received: 11/13/93 Injection Volume: 1.0 (uL) Date Extracted: 11/17/93 Dilution Factor: 1.0 Date Analyzed: 12/15/93 % Solids: 68.64 Sulfur Clean-up: N (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (ug/Kg)	(
12674-11-2	Aroclor-1016	73	(
11104-28-2	Aroclor-1221	73	(
11141-16-5	Aroclor-1232	73	
53469-21-9	Aroclor-1242	73	
12672-29-6	Aroclor-1248	73	- (
11097-69-1	Aroclor-1254	65	
11096-82-5	Aroclor-1260	73	ı

EPA SAMPLE NO. K12041 Lab Name: Aquatec, Inc. Lab Code: AQUAI 91082 **PCB** SDG: 40738 Contract: Case: SOIL Lab Sample ID: 204345 Phase Type: 9.9 Date Received: 11/13/93 Phase Weight: (g) 1.0 11/17/93 Injection Volume: (uL) Date Extracted: Dilution Factor: 1.0 Date Analyzed: 12/15/93 % Solids: 66.12 Sulfur Clean-up: N (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (ug/Kg)	
12674-11-2	Aroclor-1016	77	ι
11104-28-2	Aroclor-1221	77	ι
11141-16-5	Aroclor-1232	77	l
53469-21-9	Aroclor-1242	77	ι
12672-29-6	Aroclor-1248	77	L
11097-69-1	Aroclor-1254	77	·
11096-82-5	Aroclor-1260	77	ι

DATA REVIEW FOR

ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER SUPERFUND SITE

SDG# 40869

PCB ANALYSES

TBSA - PHASE II

Analyses performed by:

Aquatec, Inc. Colchester, Vermont

Review performed by:

Blasland, Bouck & Lee, Inc. Syracuse, New York

Summary

The following is an assessment of the PCB data package for SDG # 40869 for the TBSA - Phase II sampling of the Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site. Included with this assessment are the data review check sheets used in the review of the package and sample results for PCB analyses. Analyses were performed on the following samples:

Sample ID	Lab ID	Matrix	Sample Date
K12042	205065	soil	11/12/93
K12043	205066	soil	11/11/93
K12044	205067	soil	11/11/93
	1		
		 	
	 	 	
	 		
			N

Introduction

Analyses were performed according to the USEPA SW-846 method 8081, modified for PCB only analysis.

The data review process is intended to evaluate the data on a technical basis. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with National Functional Guidelines:

- U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
- J The compound was positively identified; however, the associated numerical value is an estimated concentration only.
- B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.
- N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.
- JN The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.
- E The compound was quantitated above the calibration range.
- D Concentration is based on a diluted sample analysis.
- UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.
- R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant QC problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC test, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

The data presented in the package has been derived using a procedure developed by Aquatec, Inc. in an attempt to improve the analytical process of calibration, identification, and quantitation of PCBs as Aroclors. Key components of this procedure include:

Calibration

The response function of the electron capture detector is inherently non-linear, and while significant linearization is achieved for this detector by electronic means, some non-linearity remains. Power function linearization is used to "straighten the curve" and allow the use of response factors for calibration purposes.

During the initial calibration a response factor is calculated for each peak in the individual Aroclors.

A weighted response factor calculation has been used to adjust for nonlinearity at the low end of the calibration curve.

Identification

Peak retention times are relative. Retention times are in set windows relative to the time markers DCB and TCMX. Time markers adjust for minor variations in column flow or instrument condition and allow the use of very tight windows which minimizes the number of both false positive and false negative peak identifications.

The determination of "which Aroclor or mixture of Aroclors will produce a chromatogram most similar to that of the residue" is made by expressing the unknown sample chromatogram as a linear combination of the Aroclors. The "most similar" Aroclor or mixture of Aroclors is determined by using a least squares minimization of the difference between the unknown chromatogram and the linear combination of Aroclors. This is similar to the procedure presented by L.E. Slivon, P.M. Schumacher and A. Alford-Stevens for the determination of Aroclor composition from GC/MS level of chlorination results.

Identification/quantitation of Aroclors in samples is based on the combined response of two columns, typically RTX-5 and RTX-35. The pooling of response combines the unique qualities of both columns to derive a more defined Aroclor pattern which less likely to be affected by interferents. Identification/quantitation data for the individual columns is provided in the package and can be used as a check on the combined column results.

Data Assessment

1. Holding Time

The specified holding times for PCB analyses on soil samples is 10 days from date of sample receipt to extraction and 40 days from extraction to analysis. All samples were extracted and analyzed within the specified holding times.

2. Blank Contamination

Quality assurance blanks, i.e., method, field or rinse blanks, are prepared to identify any contamination which may have been introduced in to the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Field and rinse blanks measure contamination of samples during field operations.

No target compounds were detected in the method blanks or instrument blanks.

3. System Performance

The system performance was acceptable for both columns.

4. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of giving acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument is giving satisfactory daily performance.

4.1 Initial Calibration

The method allows a maximum RSD of 20%. The %RSD was within acceptable limits for all Aroclors.

4.2 Continuing Calibration

A maximum %D of 15 is allowed. All continuing calibrations were within the specified limits.

5. Surrogates / System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique.

Recoveries were below acceptable control limits for one surrogate in samples K12043 and K12044. No qualifiers were added to the data based on surrogate performance. All other surrogate recoveries were within acceptable control limits.

6. Compound Identification

The determination of Aroclor presence is made by expressing the unknown sample chromatogram as a linear combination of the Aroclors. The most similar Aroclor or mixture of Aroclors is determined by using a least squares minimization of the difference between the unknown chromatogram and the linear combination of Aroclors.

Identification/quantitation of Aroclors is based on the combined response of the RTX-5 and RTX-35 columns. Identification/quantitation data for the individual columns is provided in the package and has been used as a check on the combined column results.

A review of the sample chromatograms indicate that the Aroclors have been correctly identified/quantitated.

7. Matrix Spike/Matrix Spike Duplicate/Matrix Spike Blank

Matrix spike and matrix spike duplicate data are used to assess the precision and accuracy of the analytical method.

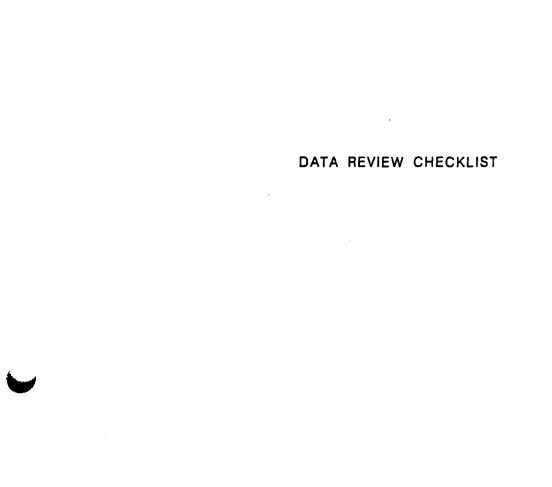
No matrix spike or matrix spike duplicate was included in this data set.

8. Field Duplicates

No field duplicates were included in this data set.

9. System Performance and Overall Assessment

Overall system performance was acceptable. Other than those deviations specifically mentioned in this review, the overall data quality is within the guidelines listed in the analytical method.



PCB Data Review Checklist

	YES	NO	NA
Data Completeness and Deliverables			
Is there a narrative or cover letter present?	X		
Are the samples numbers included in the narrative?	X		···
Are the sample chain-of-custodies present?	X		
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?		x	
Holding Times			
Have any holding times been exceeded?		X	
Surrogate Recovery			
Are surrogate recovery forms present?	X		
Are all the samples listed on the appropriate surrogate recovery form?	X		
Are the outliers correctly marked with an asterisk?	X		
Were recoveries of TCMX or DCB outside of specified limits for any sample or blank?	x		
If yes, were the samples reanalyzed?		x	
Matrix Spikes			
Is there a matrix spike recovery form present?		x	
Were matrix spikes analyzed at the required frequency?	X		
How many spike recoveries were outside of QC limits?			
How many RPDs for matrix spike and matrix spike duplicate were outside of QC limits?			
_0 out of _0			
Blanks			
ls a Method Blank Summary Form present?	X		
Has a method blank been analyzed for each set of samples or for each 20 samples, whichever is more frequent?	X		
Has an instrument blank been analyzed at the beginning of each 12 hour period following the initial calibration?	x		

PCB Data Review Checklist - Page 2

	YES	NO	NA
ls the chromatographic performance acceptable for each instrument?	x		
Do any method/reagent/instrument blanks have positive results?		x	
Do any field/rinse blanks have positive results?		X	
Are there field/rinse/equipment blanks associated with every sample?	x		
Calibration and GC Performance			
Are the following chromatograms and data printouts present?			
Aroclor 1016/1260	X		
Aroclor 1221	X		
Aroclor 1232	X		
Aroctor 1242	X		
Aroclor 1248	X		
Aroclor 1254	X		
Instrument Blanks	X		
Are Initial Calibration Summary Forms present and complete for each column and analytical sequence?	X		
Are the linearity criteria for the initial analyses within limits for both columns (20% RSD)	x		
Have all samples been injected within a 12 hour period beginning with the injection of an instrument blank?	X		
Is a Calibration Verification Summary Form present and complete for each continuing standard analyzed?	X		
Are %D values for all compounds within limits (less than 15%)?	X		
Analytical Sequence Check			
Is a analytical sequence form present and complete for each column and each period of analyses?	X		
Was the proper analytical sequence followed?	X		

PCB Data Review Checklist - Page 3

	YES	NO	NA
Cleanup Efficiency Verification	· 		
If GPC cleanup was performed, is Gel Permeation Chromatography Check Form present?		x	
Are percent recoveries of the compounds used to check the efficiency of the cleanup procedure within QC limits?			x
PCB Identification			
Is both a combined and single column Aroclor Identification Report present for every sample?	x		
Do the combined column and individual column Aroclor identifications agree?	X		
Were there any false negatives?		X	
Was GC/MS confirmation provided when required?			X
Compound Quantitation and Reported Detection Li	mits		•
Are the reporting limits adjusted to reflect sample dilutions, and for soils, sample moisture?	x		
Chromatogram Quality			
Were the baselines stable?	X		
Were any electronegative displacement (negative peaks) or unusual peaks detected?		<u> x</u>	
Field Duplicates			
Where field duplicates submitted with the samples?	X		

PCB Holding Time and Surrogate Recovery Summary

Sample ID	Holding	Surrogates	- Column 1	Surrogates -	Column 2
	Time	тсх	DCB	TCX	DCB
K12042	OK for all		ok ·		ок
K12043	samples	↓ (49)		↓ (48)	
K12044		4 (41)		↓ (42)	
					_
					·····
					

Surrogate Standards TCX Tetrachloro-m-xylene DCB Decachlorobiphenyl

Qualifiers:

- D Surrogates diluted out
- Recovery high Recovery low

Unless otherwise noted, all parameters are within specified limits.

PCB Calibration Summary

Instrument: <u>HPYYYY</u> Column: <u>RTX-35 / RTX-5</u>

Date:	12/30/93 1502	12/31	12/31	12/31	12/31	1/1	1/1
Time:	to 12/31/93 1158	1312	1348	2112	2149	0512	0549
	initial Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal	Cont. Cal.
	%RSD	% D	% D	% D	%D	%D	%D
Aroclor 1016	4.6 / 3.9	_	7.0				
Aroclor 1221	3.3 / 4.2						
Aroclor 1232	2.4 / 3.1						
Aroclor 1242	4.9 / 3.0				3.0		
Arocior 1248	3.6 / 3.0	2.5		4.5		2.0	
Aroclor 1254	3.1 / 2.6						4.0
Aroclor 1260	4.1 / 2.9						
Tetrachioro-m-xylene	6.8 / 3.1						
Decachlorobiphenyl	3.5 / 7.8						
Affected Samples:							
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Γ							
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CORRECTED ANALYSIS SUMMARY FORMS

EPA SAMPLE NO.

 Lab Name:
 Aquatec, Inc.
 Lab Code:
 AQUAI

 Contract:
 91082
 Case:
 PCB
 SDG:
 40869

Lab Sample ID: SOIL Phase Type: 205065 Phase Weight: 10.1 **(g) Date Received:** 11/20/93 Injection Volume: 1.0 (uL) **Date Extracted:** 11/21/93 Dilution Factor: 1.0 Date Analyzed: 12/31/93 69.51 % Solids: Sulfur Clean-up: Υ (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (ug/Kg)	0
12674-11-2	Aroclor-1016	72	U
11104-28-2	Aroclor-1221	72	U
11141-16-5	Aroclor-1232	72	U
53469-21-9	Aroclor-1242	72	U
12672-29-6	Aroclor-1248	72	U
11097-69-1	Aroclor-1254	200	
11096-82-5	Aroclor-1260	30	J

EPA SAMPLE NO.

K12043 Lab Name: Aquatec, Inc. Lab Code: AQUAI PCB 91082 SDG: 40869 Case:

Phase Type: SOIL Lab Sample ID: 205066 Phase Weight: 10.1 (g) Date Received: 11/20/93 Injection Volume: 1.0 (uL) Date Extracted: 11/21/93 Dilution Factor: 20.0 Date Analyzed: 12/31/93 (Y/N) % Solids: 44.00 Sulfur Clean-up:

Contract:

CAS NO.	COMPOUND	CONCENTRATION (ug/Kg)	0
12674-11-2	Aroclor-1016	2300	Ų
11104-28-2	Arocior-1221	2300	U
11141-16-5	Arocior-1232	2300	U
53469-21-9	Aroclor-1242	2300	Ų
12672-29-6	Aroclor-1248	25000	
11097-69-1	Aroclor-1254	2300	U
11096-82-5	Aroclor-1260	2300	U

EPA SAMPLE NO.

K12044 Lab Name: Aquatec, Inc. Lab Code: IAUDA 91082 **PCB** SDG: 40869 Contract: Case: SOIL Phase Type: Lab Sample ID: 205067 Phase Weight: 10.0 (g) Date Received: 11/20/93 Injection Volume: 11/21/93 1.0 (uL) Date Extracted: **Dilution Factor:** 10.0 Date Analyzed: 12/31/93 54.46 % Solids: Sulfur Clean-up: (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (ug/Kg)	
12674-11-2	Aroclor-1016	920	U
11104-28-2	Aroclor-1221	920	U
11141-16-5	Aroclor-1232	920	U
53469-21-9	Arocior-1242	920	U
12672-29-6	Aroclor-1248	11000	
11097-69-1	Aroclor-1254	3800	
11096-82-5	Aroclor-1260	920	U

DATA REVIEW FOR

ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER SUPERFUND SITE

SDG# 42788

PCB, PESTICIDE AND MERCURY ANALYSES

BIOTA - FISH

Analyses performed by:

Aquatec, Inc. Colchester, Vermont

Review performed by:

Blasland, Bouck & Lee, Inc. Syracuse, New York

Summary

The following is an assessment of the Pesticide/PCB/PBB and Mercury data for SDG# 42788 for the Biota sampling of the Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site. Included with this assessment are the data review check sheets used in the review of the package and the corrected sample results. Analyses were performed on the following samples:

					Anal	ysie
Sample ID	Lab ID	Species	Description	Sample Location	PC8	%Upid
K40133F	213362	bass	fillet	Lake Allegan	x	x
K40133R	213363	bass	Carcass	Lake Allegan	x	x
K40135F	213365	bass	fillet	Lake Allegan	х	х
K40135R	213366	bass	CAICASS	Lake Allegan	x	х
K40136F	213368	bass	fillet	Lake Allegan	×	×
K40136R	213369	bass	carcass	Lake Allegan	×	×
K40137F	213371	bass	fillet	Lake Allegan	x	×
K40137R	213372	bass	carcass	Lake Allegan	x	×
K40138F	213374	bass	fillet	Lake Allegan	x	×
K40138R	213375	bass	carcass	Lake Allegan	x	×
K40140F	213377	bass	fillet	Lake Allegan	×	×
K40140R	213378	bass	carçass	Lake Allegan	x	x
K40350F*	213380	carp	fillet	Plainwell	×	x
K40350R	213381	carp	Carcass	Plainwell	X	x
K40351F	213383	bass	fillet	Plainwell	x	x
K40351R*	213384	bass	carcass	Plainwell	×	×
K40352F	213386	bass	fillet	Plainwell	X	x
K40352R	213387	bass	carcass	Plainwell	x	x
K40353F	213389	bass	fillet	Plainwell	x	x
K40353R	213390	bass	carcass	Plainwell	x	×
K40354F	213392	bass	fillet	Plainwell	x	×
K40354R	213393	bass	carcass	Plainwell	x	×
K40359F	213395	carp	fillet	Plainwell	х	х
K40359R	213396	carp	Carcass	Plainwell	x	×
K40361F	213398	carp	fillet	Plainwell	x	x
K40361R	213399	carp	carcass	Plainwell	×	x
K40362F	213401	carp	fillet	Plainwell	x	x
K40362R	213402	carp	carcass	Plainwell	×	x
K40363F	213404	carp	fillet	Plainwell	×	x

					Anal	Analysis	
	Lab ID	Species	Description	Sample Location	PCB	%Lipid	
K40363R	213405	carp	carcass	Plainwell	x	×	
K40364F	213407	carp	fillet	Plainwell	x	x	
K40364R	213408	carp	carcass	Plainwell	x	x	
K40369F	213410	bass	fillet	Plainwell	×	×	
K40369R	213411	bass	carcass	Plainwell	x	×	
K40370F	213413	bass	fillet	Plainwell	X	×	
K40370R	213414	bass	carcass	Plainwell	x	x	

^{*} MS/MSD/DUP performed on sample

PCB ANALYSES

Introduction

Analyses were performed according to the USEPA SW-846 method 8081, modified for PCB only analysis.

The data review process is intended to evaluate the data on a technical basis. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with National Functional Guidelines:

- U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
- J The compound was positively identified; however, the associated numerical value is an estimated concentration only.
- B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.
- N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.
- JN The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.
- E. The compound was quantitated above the calibration range.
- D Concentration is based on a diluted sample analysis.
- UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.
- R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant QC problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC test, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

The data presented in the package has been derived using a procedure developed by Aquatec, Inc. in an attempt to improve the analytical process of calibration, identification, and quantitation of PCBs as Aroclors. Key components of this procedure include:

Calibration

The response function of the electron capture detector is inherently non-linear, and while significant linearization is achieved for this detector by electronic means, some non-linearity remains. Power function linearization is used to "straighten the curve" and allow the use of response factors for calibration purposes.

During the initial calibration a response factor is calculated for each peak in the individual Aroclors.

A weighted response factor calculation has been used to adjust for non-linearity at the low end of the calibration curve.

Identification

Peak retention times are relative. Retention times are in set windows relative to the time markers DCB and TCMX. Time markers adjust for minor variations in column flow or instrument condition and allow the use of very tight windows which minimizes the number of both false positive and false negative peak identifications.

The determination of "which Aroclor or mixture of Aroclors will produce a chromatogram most similar to that of the residue" is made by expressing the unknown sample chromatogram as a linear combination of the Aroclors. The "most similar" Aroclor or mixture of Aroclors is determined by using a least squares minimization of the difference between the unknown chromatogram and the linear combination of Aroclors. This is similar to the procedure presented by L.E. Slivon, P.M. Schumacher and A. Alford-Stevens for the determination of Aroclor composition from GC/MS level of chlorination results.

Identification/quantitation of Aroclors in samples is based on the combined response of two columns, typically RTX-5 and RTX-35. The pooling of response combines the unique qualities of both columns to derive a more defined Aroclor pattern which less likely to be affected by interferents. Identification/quantitation data for the individual columns is provided in the package and can be used as a check on the combined column results.

Data Assessment

1. Holding Time

The specified holding time for PCB analyses from extraction is 40 days. All samples were analyzed within the specified holding time.

2. Blank Contamination

Quality assurance blanks, i.e., method and instrument blanks, are prepared to identify any contamination which may have been introduced into the samples during sample preparation or analysis. Method blanks measure laboratory contamination during preparation. Instrument blanks measure instrument contamination and sample cross-contamination.

No Aroclors were detected in the method or instrument blanks.

3. System Performance

The system performance was acceptable for both columns.

4. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of giving acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument is giving satisfactory daily performance.

4.1 Initial Calibration

The method allows a maximum RSD of 20%. The %RSD was within acceptable limits for all Aroclors.

4.2 Continuing Calibration

A maximum %D of 15 is allowed. All continuing calibrations were within the specified limits.

5. Surrogates / System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique.

Recoveries were below acceptable control limits for both surrogates in samples K40135R, K40140R, K40350R, K40351F, K40351R, K40351RMS, and K40351RMSD. All data for these samples have been qualified as estimated. Recoveries were below acceptable control limits for one surrogate in samples K40133F, K40133R, K40135F, K40136F, K40136R, K40137F, K40137R, K40138F, K40138R, K40350FMS, K40350FMSD, K40352R, K40353R, K40354R, K40359F, K40359R, K40361F, K40361R, K40362R, K40363R, K40364F, K40364R, K40369R and K40370R. No qualifiers were added to these samples based on surrogate performance. All other surrogate recoveries were within acceptable control limits.

6. Compound Identification

The determination of Aroclor presence is made by expressing the unknown sample chromatogram as a linear combination of the Aroclors. The most similar Aroclor or mixture of Aroclors is determined by using a least squares minimization of the difference between the unknown chromatogram and the linear combination of Aroclors.

Identification/quantitation of Aroclors is based on the combined response of the RTX-5 and RTX-35 columns. Identification/quantitation data for the individual columns is provided in the package and has been used as a check on the combined column results.

A review of the sample chromatograms indicate that the Aroclors have been correctly identified/quantitated.

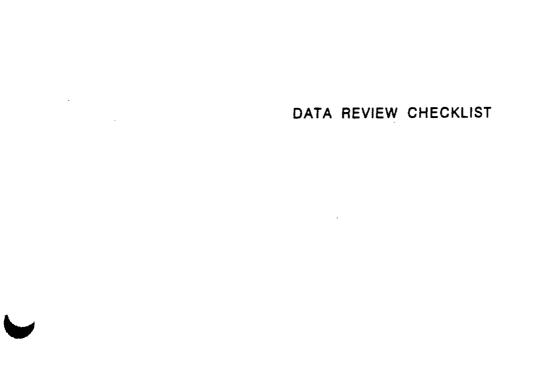
7. Matrix Spike/Matrix Spike Duplicate/Matrix Spike Blank

Matrix spike and matrix spike duplicate data are used to assess the precision and accuracy of the analytical method.

All matrix spike and matrix spike duplicate recoveries were within acceptable control limits. The relative percent difference between recoveries (RPD) were outside the acceptable control limits for both Aroclors in sample K40350F and for Aroclor 1254 in sample K40351R. No qualifiers were added to the data based on spike performance.

8. System Performance and Overall Assessment

Overall system performance was acceptable. Other than those deviations specifically mentioned in this review, the overall data quality is within the guidelines listed in the analytical method.



PCB Data Review Checklist

	YES	NO	NA_
Data Completeness and Deliverables		•	
Is there a narrative or cover letter present?	X		
Are the samples numbers included in the narrative?	X		
Are the sample chain-of-custodies present?	X		
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?		X	
Holding Times			
Have any holding times been exceeded?		X	
Surrogate Recovery			
Are surrogate recovery forms present?	X		
Are all the samples listed on the appropriate surrogate recovery form?	X		
Are the outliers correctly marked with an asterisk?	<u> </u>		
Were recoveries of TCMX or DCB outside of specified limits for any sample or blank?	<u> </u>		
If yes, were the samples reanalyzed?		X	
Matrix Spikes			
Is there a matrix spike recovery form present?		X	
Were matrix spikes analyzed at the required frequency?			X
How many spike recoveries were outside of QC limits?			
How many RPDs for matrix spike and matrix spike duplicate were outside of QC limits?			
3 out of4			
Blanks			
ls a Method Blank Summary Form present?	X		
Has a method blank been analyzed for each set of samples or for each 20 samples, whichever is more frequent?	χ .		
Has an instrument blank been analyzed at the beginning of each 12 hour period following the initial calibration?	x		
outinituitott:			

PCB Data Review Checklist - Page 2

	YES	NO	NA
Is the chromatographic performance acceptable for each instrument?	x	-	
Do any method/reagent/instrument blanks have positive results?		x	
Do any field/rinse blanks have positive results?			X
Are there field/rinse/equipment blanks associated with every sample?		x	
Calibration and GC Performance			
Are the following chromatograms and data printouts present?			
Aroclor 1016/1260	X		
Aroclor 1221	X		
Arocior 1232	X		
Aroclor 1242	X		
Aroclor 1248	<u> </u>		
Aroclor 1254	X		
Instrument Blanks	X		
Are Initial Calibration Summary Forms present and complete for each column and analytical sequence?	X		
Are the linearity criteria for the initial analyses within limits for both columns (20% RSD)	X		
Have all samples been injected within a 12 hour period beginning with the injection of an instrument blank?	X		
Is a Calibration Verification Summary Form present and complete for each continuing standard analyzed?	X		
Are %D values for all compounds within limits (less than 15%)?	x		
Analytical Sequence Check			
Is a analytical sequence form present and complete for each column and each period of analyses?	X		
Was the proper analytical sequence followed?	Х		

PCB Data Review Checklist - Page 3

	YES	NO	NA
Cleanup Efficiency Verification	· 		
If GPC cleanup was performed, is Gel Permeation Chromatography Check Form present?	x		
Are percent recoveries of the compounds used to check the efficiency of the cleanup procedure within QC limits?	x		
PCB identification			
Is both a combined and single column Aroclor Identification Report present for every sample?	X		
Do the combined column and individual column Aroclor identifications agree?	X		
Were there any false negatives?		X	
Was GC/MS confirmation provided when required?			x
Compound Quantitation and Reported Detection Lin	nits		
Are the reporting limits adjusted to reflect sample dilutions, and for soils, sample moisture?	X		
Chromatogram Quality			
Were the baselines stable?	X		
Were any electronegative displacement (negative peaks) or unusual peaks detected?		x	
Field Duplicates			
Where field duplicates submitted with the samples?		X	

PCB Holding Time and Surrogate Recovery Summary

Sample ID	Holding	Surrogates	- Column 1	Surrogates	- Column 2
	Time	тсх	DCB	TCX	DCB
K40133F	OK for all	↓ (48)		↓ (52)	
K40133R	samples	↓ (44)		Į (53)	
K40135F		↓ (48)		↓ (53)	
K40135R		↓ (44)	↓ (58)	↓ (53)	
K40136F		↓ (50)		↓ (51)	
K40136R		↓ (47)		↓ (56)	
K40137F		↓ (47)		↓ (48)	
K40137R		↓ (45)		↓ (50)	
K40138F		↓ (46)		↓ (51)	
K40138R		↓ (42)		↓ (50)	
K40140F		Į (58)		↓ (57)	
K40140R		↓ (44)	(54)	↓ (51)	↓ (58)
K40350F					
K40350FMS		↓ (49)		↓ (50)	
K40350FMSD		↓ (40)		↓ (41)	
K40350R		↓ (45)	↓ (54)	↓ (52)	↓ (58)
K40351F		↓ (45)	↓ (52)	↓ (45)	↓ (54)
K40351R		† (39)	į (56)	↓ (46)	↓ (59)
K40351RMS		↓ (44)	↓ (58)	↓ (58)	
K40351 RMSD		↓ (40)	↓ (45)	↓ (51)	↓ (48)
K40352F					
K40352R		↓ (43)		↓ (48)	
K40353F					
K40353R		Į (58)		↓ (58)	
K40354F					
K40354R		↓ (54)		↓ (53)	
K40359F		↓ (52)		↓ (51)	
K40359R		↓ (53)		↓ (52)	
K40361F		↓ (50)		↓ (49)	
K40361R		↓ (51)		↓ (51)	
K40362F				↓ (59)	
K40362R		Į (53)		↓ (52)	

K40363F		
K40363R	↓ (54)	↓ (54)
K40364F	↓ (54)	↓ (55)
K40364R	↓ (53)	↓ (54)
K40369F		
K40369R	↓ (58)	↓ (58)
K40370F		
K40370R	↓ (58)	↓ (57)

Surrogate Standards TCX Tetrachloro-m-xylene DCB Decachlorobiphenyl

Qualifiers:

Surrogates diluted out Recovery high Recovery low D

Unless otherwise noted, all parameters are within specified limits.

PCB Calibration Summary

Instrument: <u>HP2087</u> Column: <u>RTX-35 / RTX-5</u>

Date:	4/5/94 1506	4/7	4/6	4/7	4/7	4/7	4/7
Time:	to 4/6/94 1127	1811	1847	0158	0234	0945	1021
	Initial Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont Cal.
	%RSD	%D	%D	%D	% D	%D	% D
Aracior 1016	5.1 / 5.0		2.0				
Aroclor 1221	5.1 / 5.2						
Arocior 1232	8.5 / 8.3						
Aroclor 1242	4.8 / 5.4				0.5		
Arocior 1248	7.8 / 4.4	2.5		0.5		8.0	
Aroclor 1254	4.4 / 5.1					. 	8.0
Arocior 1260	2.6 / 2.5						
Tetrachloro-m-xylene	6.7 / 21.7						
Decachlorobiphenyl	7.6 / 8.1						
Affected Samples:							
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Instrument: <u>HP2087</u> Column: <u>RTX-35 / RTX-5</u>

Date;		4/7	4/7				
Time:		1621	1657				
	initial Cat.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal:
	%RSD	%D	%D	%D	% D	%D	%D
Aroclor 1016							
Arocior 1221							
Aroclor 1232							
Aroclor 1242							
Aroclor 1248		8.0					
Arocior 1254							
Arocior 1260			1.0				
Tetrachioro-m-xylene							
Decachiorobiphenyl							
Affected Samples:							
		- , " - "					
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Instrument: <u>HP2618</u> Column: <u>RTX-35 / RTX-5</u>

Date:	4/17/94 1723	4/18	4/18	4/19	4/19	4/19	4/19
Time:	to 4/18/94 1247	1807	1841	0132	0206	0852	0932
	Initial Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cel.	Cont. Cal.	Cont.
	%RSD	% D	% D	%D	% D	% D	% D
Aroclor 1016	3.4 / 3.4	1.0					
Aroclor 1221	3.9 / 5.2						
Aroclor 1232	2.9 / 3.5						
Aroclor 1242	4.7 / 4.6			10.5			
Aroclor 1248	2.7 / 2.2		3.5		7.0	8.5	
Aroclor 1254	2.9 / 2.9						5.0
Arocior 1260	3.1 / 3.2		_				
Tetrachloro-m-xylene	5.0 / 3.5						
Decachlorobiphenyl	8.9 / 7.6						
Affected Samples:							
1							
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Γ							

instrument: <u>HP2618</u> Column: <u>RTX-35 / RTX-5</u>

Date:		419	4/19	4/19	4/19		
Time:		1515	1549	2241	2315		
	initial Cal.	Cont. Cal.	Gont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.
	% ASD	%D	%D	% D	% D	*D	% D
Aroclor 1016					5.0		
Aroclor 1221							
Arocior 1232	<u></u>						
Aroclar 1242							
Aroclor 1248		7.0		3.5			
Aroclor 1254							
Aroclor 1260		<u> </u>	2.5				
Tetrachioro-m-xylene							
Decachlorobiphenyl							
iffected Samples:							
		: 					<u> </u>
į							
							- "

Instrument: <u>HP2618</u>
Column: <u>RTX-35 / RTX-5</u>

Date:	4/30/94 0543	5/2	5/2	5/3	5/3	5/3	5/3
Time:	to 5/1/94 0106	1632	1708	0001	0035	1342	1416
	initial Cal.	Cont. Cal.	Gont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.
	*ASD	%D	% D	% D	% D	% D	%D
Aroclor 1016	4.2 / 4.4		L				
Aroclor 1221	5.1 / 6.9		<u> </u>				<u> </u>
Aroclor 1232	4.2 / 3.1						
Arocior 1242	3.1 / 3.4			1		<u> </u>	1.5
Arocior 1248	3.4 / 3.0	1.5		3.0		3.0	<u> </u>
Aroclor 1254	3.1 / 3.6		6.0				<u> </u>
Arocior 1260	3.8 / 3.4				4.0		
Tetrachloro-m-xylene	5.2 / 6.4						
Decachlorobiphenyl	7.9 / 8.1						
Affected Samples:							

Instrument: <u>HP2618</u>
Column: <u>RTX-35 / RTX-5</u>

Cal. Cal.	Date:		5/8	5/3				
Cal. Cal.	Time:		2109	2143				
Arocior 1016 Arocior 1221 Arocior 1232 Arocior 1242 Arocior 1248 Arocior 1254 Arocior 1260 Tetrachioro-m-xylene Decachiorobiphenyl		initial Cal.						Cont.
Aroclor 1221		%RSD	% D	%D	%D	%D	% D	% D
Aroclor 1232 4.0 Aroclor 1248 4.0 Aroclor 1254 7.5 Aroclor 1260 Tetrachloro-m-xylene Decachlorobiphenyl Decachlorobiphenyl	Aroclor 1016							
Aroclor 1242 4.0 Aroclor 1248 7.5 Aroclor 1254 7.5 Aroclor 1260 1 Tetrachloro-m-xylene 0 Decachlorobiphenyl 0	Aroclor 1221						<u> </u>	
Arocior 1248 4.0 Arocior 1254 7.5 Arocior 1260 Tetrachioro-m-xylene Decachiorobiphenyl	Arocior 1232							
Arocior 1254 7.5 Arocior 1260 Tetrachioro-m-xylene Decachiorobiphenyl	Aroclor 1242							
Aroclor 1260 Tetrachioro-m-xylene Decachiorobiphenyl	Aroclor 1248		4.0					
Tetrachioro-m-xylene Decachiorobiphenyl	Arocior 1254			7.5				
Decachlorobiphenyl	Aroclor 1260		<u></u>					
Decachlorobiphenyl Affected Samples:	Tetrachioro-m-xylene							
Affected Samples:	Decachlorobiphenyl							
	Affected Samples:							
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CORRECTED ANALYSIS SUMMARY FORMS

EPA SAMPLE NO.

N

(Y/N)

K40133F Lab Code: Lab Name: Aquatec, Inc. AQUAI 91082 Case: BIO SDG: 42788 Contract: Phase Type: **BIOTA** Lab Sample ID: 213362 Phase Weight: 10.0 Date Received: 03/08/94 (g) Injection Volume: 1.0 (uL) Date Extracted: 03/25/94 Dilution Factor: 10.0 Date Analyzed: 04/06/94

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	Q
12674-11-2	Aroclor-1016	0.50	U
11104-28-2	Aroclor-1221	0.50	U
11141-16-5	Aroclor-1232	0.50	U
53469-21-9	Aroclor-1242	3.5	
12672-29-6	Aroclor-1248	0.50	U
11097-69-1	Aroclor-1254	2.2	
11096-82-5	Aroclor-1260	0.50	U

Sulfur Clean-up:

EPA SAMPLE NO. K40133R Lab Name: Aquatec, Inc. Lab Code: **AQUAI** Contract: 91082 BIO SDG: Case: 42788 Phase Type: **BIOTA** Lab Sample ID: 213363 Phase Weight: Date Received: 10.0 (g) 03/08/94 Injection Volume: 1.0 (uL) Date Extracted: 03/25/94 Dilution Factor: 15.0 Date Analyzed: 04/06/94 N Sulfur Clean-up: (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	c
		, , , , , , , , , , , , , , , , , , ,	
12674-11-2	Aroclor-1016	0.75	L
11104-28-2	Aroclor-1221	0.75	l
11141-16-5	Aroclor-1232	0.75	L
53469-21-9	Aroclor-1242	7.2	
12672-29-6	Aroclor-1248	0.75	L
11097-69-1	Aroclor-1254	4.5	
11096-82-5	Aroclor-1260	0.75	

EPA SAMPLE NO.

K40135F Lab Code: Lab Name: Aquatec, Inc. IAUDA Contract: 91082 BIO 42788 Case: SDG: Phase Type: **BIOTA** Lab Sample ID: 213365 Phase Weight: 10.0 **(g)** Date Received: 03/08/94 Injection Volume: 1.0 (uL) Date Extracted: 03/25/94 10.0 04/07/94 Dilution Factor: Date Analyzed: Sulfur Clean-up: (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	0
12674-11-2	Aroclor-1016	0.50	U
11104-28-2	Aroclor-1221	0.50	U
11141-16-5	Aroclor-1232	0.50	U
53469-21-9	Aroclor-1242	2.3	
12672-29-6	Aroclor-1248	0.50	U
11097-69-1	Aroclor-1254	3.5	
11096-82-5	Aroclor-1260	0.50	U

EPA SAMPLE NO. K40135R Lab Name: Aquatec, Inc. Lab Code: AQUAI SDG: ____ 42788 Contract: 91082 Case: BIO Phase Type: **BIOTA** Lab Sample ID: 213366 Phase Weight: 10.0 **Date Received:** 03/08/94 **(g)** Injection Volume: 1.0 (uL) Date Extracted: 03/25/94 Dilution Factor: 15.0 Date Analyzed: 04/07/94 Sulfur Clean-up: (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	Q
12674-11-2	Aroclor-1016	0.75	υJ
11104-28-2	Aroclor-1221	0.75	υJ
11141-16-5	Aroclor-1232	0.75	בט
53469-21-9	Aroclor-1242	2.7	7
12672-29-6	Aroclor-1248	0.75	υJ
11097-69-1	Aroclor-1254	4.4	
11096-82-5	Aroclor-1260	0.75	UJ

EPA SAMPLE NO. K40136F Lab Name: Aquatec, Inc. Lab Code: AQUAI 91082 SDG: 42788 Case: BIO Contract: **BIOTA** Phase Type: Lab Sample ID: 213368 10.0 Phase Weight: **(g)** Date Received: 03/08/94 1.0 Date Extracted: Injection Volume: (uL) 03/25/94 5.0 04/07/94 Dilution Factor: Date Analyzed: _ (Y/N) Sulfur Clean-up: N

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	
12674-11-2	Aroclor-1016	0.25	U
11104-28-2	Aroclor-1221	0.25	U
11141-16-5	Aroclor-1232	0.25	U
53469-21-9	Aroclor-1242	2.1	
12672-29-6	Aroclor-1248	0.25	U
11097-69-1	Aroclor-1254	1.1	
11096-82-5	Aroclor-1260	0.25	U

EPA SAMPLE NO.

 Lab Code:
 AQUAI

 Case:
 BIO
 SDG:
 42788

Phase Type: **BIOTA** Lab Sample ID: 213369 Phase Weight: 10.0 Date Received: **(g)** 03/08/94 Injection Volume: _ 1.0 (uL) Date Extracted: 03/25/94 Dilution Factor: 15.0 04/07/94 Date Analyzed: Sulfur Clean-up: (Y/N)

Lab Name: Aquatec, Inc.

Contract:

91082

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	
12674-11-2	Aroclor-1016	0.75	Ĺ
11104-28-2	Aroclor-1221	0.75	L
11141-16-5	Aroclor-1232	0.75	L.
53469-21-9	Aroclor-1242	8.2	
12672-29-6	Aroclor-1248	0.75	Ĺ
11097-69-1	Aroclor-1254	5.0	
11096-82-5	Aroclor-1260	0.75	ί

EPA SAMPLE NO.

K40137F Lab Name: Aquatec, Inc. Lab Code: AQUAI 91082 Contract: Case: BIO SDG: 42788 Phase Type: **BIOTA** Lab Sample ID: 213371 10.0 Phase Weight: (g) Date Received: 03/08/94

Injection Volume:

Dilution Factor:

1.0

5.0

(uL)

Date Analyzed: 04/07/94

Date Extracted:

Sulfur Clean-up: N (Y/N)

03/25/94

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	Q
12674-11-2	Aroclor-1016	0.25	U
11104-28-2	Aroclor-1221	0.25	U
11141-16-5	Aroclor-1232	0.25	U
53469-21-9	Aroclor-1242	0.98	-
12672-29-6	Aroclor-1248	0.25	U
11097-69-1	Aroclor-1254	1.2	
11096-82-5	Arocior-1260	0.25	U

EPA SAMPLE NO. K40137R Lab Name: Aquatec, Inc. Lab Code: AQUAI Contract: 91082 Case: _ BIO SDG: 42788 BIOTA Phase Type: Lab Sample ID: 213372 Phase Weight: __ 10.0 (g) Date Received: 03/08/94 Injection Volume: _ 1.0 (uL) Date Extracted: 03/25/94 Dilution Factor: 10.0 Date Analyzed: 04/07/94

Sulfur Clean-up:

(Y/N)

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	0
12674-11-2	Aroclor-1016	0.50	υ
11104-28-2	Aroclor-1221	0.50	U
11141-16-5	Aroclor-1232	0.50	U
53469-21-9	Aroclor-1242	2.4	
12672-29-6	Aroclor-1248	0.50	U
11097-69-1	Aroclor-1254	2.8	
11096-82-5	Aroclor-1260	0.50	υ

EPA SAMPLE NO. K40138F Lab Name: Aquatec, Inc. Lab Code: AQUAI 91082 Case: Contract: BIO SDG: _ 42788 Phase Type: **BIOTA** Lab Sample ID: 213374 Phase Weight: 10.0 Date Received: 03/08/94 (0) Injection Volume: _ (uL) Date Extracted: 1.0 03/25/94 10.0 Dilution Factor: Date Analyzed: 04/07/94 Sulfur Clean-up: N (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	
12674-11-2	Aroclor-1016	0.50	ι
11104-28-2	Aroclor-1221	0.50	
11141-16-5	Aroclor-1232	0.50	
53469-21-9	Aroclor-1242	1.4	
12672-29-6	Aroclor-1248	0.50	
11097-69-1	Aroclor-1254	2.0	
11096-82-5	Aroclor-1260	0.50	

EPA SAMPLE NO.

N

(Y/N)

K40138R Lab Name: Aquatec, Inc. Lab Code: AQUAI 42788 Contract: 91082 BIO SDG: Case: Lab Sample ID: Phase Type: BIOTA 213375 Phase Weight: 10.0 Date Received: (g) 03/08/94 Injection Volume: (uL) 1.0 Date Extracted: 03/25/94 Dilution Factor: 15.0 04/07/94 Date Analyzed:

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	(
12674-11-2	Aroclor-1016	0.75	
11104-28-2	Aroclor-1221	0.75	
11141-16-5	Aroclor-1232	0.75	
53469-21-9	Aroclor-1242	3.9	
12672-29-6	Aroclor-1248	0.75	
11097-69-1	Aroclor-1254	6.0	
11096-82-5	Aroclor-1260	0.75	Į

Sulfur Clean-up:

EPA SAMPLE NO. K40140F Lab Code: Lab Name: Aquatec, Inc. AQUAI 91082 BIO SDG: 42788 Contract: Case: Phase Type: **BIOTA** Lab Sample ID: 213377 Phase Weight: 10.0 **(g)** Date Received: 03/08/94 Injection Volume: 1.0 (uL) Date Extracted: 03/25/94 Dilution Factor: 2.0 Date Analyzed: 04/18/94 Sulfur Clean-up: (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	0
12674-11-2	Aroclor-1016	0.10	_ υ
11104-28-2	Aroclor-1221	0.10	U
11141-16-5	Aroclor-1232	0.10	U
53469-21-9	Aroclor-1242	0.70	
12672-29-6	Aroclor-1248	0.10	U
11097-69-1	Aroclor-1254	0.88	
11096-82-5	Aroclor-1260	0.10	U

EPA SAMPLE NO. K40140R Lab Name: Aquatec, Inc. Lab Code: AQUAI 91082 42788 Contract: Case: _ BIO SDG: Phase Type: **BIOTA** Lab Sample ID: 213378 Phase Weight: 10.0 (g) Date Received: 03/08/94 Injection Volume: 1.0 (uL) Date Extracted: 03/25/94 Dilution Factor: 15.0 Date Analyzed: 04/07/94 Sulfur Clean-up: Ν (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	<u> </u>
12674-11-2	Aroclor-1016	0.75	υσ
11104-28-2	Aroclor-1221	0.75	0.2
11141-16-5	Aroclor-1232	0.75	υ <u>1</u>
53469-21-9	Aroclor-1242	2.4	
12672-29-6	Arocior-1248	0.75	UJ
11097-69-1	Aroclor-1254	3.5	J
11096-82-5	Aroclor-1260	0.75	UJ

EPA SAMPLE NO. K40350F Lab Code: IAUDA Lab Name: Aquatec, Inc. Case: 91082 BIO SDG: ___ 42788 Contract: _ Phase Type: BIOTA Lab Sample ID: 213380 Phase Weight: _ 10.0 Date Received: 03/08/94 (g) Injection Volume: 1.0 (uL) Date Extracted: 03/25/94 Dilution Factor: 2.0 Date Analyzed: 05/03/94 Sulfur Clean-up: (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	0
12674-11-2	Aroclor-1016	0.10	U
11104-28-2	Aroclor-1221	0.10	U
11141-16-5	Arocior-1232	0.10	U
53469-21-9	Arocior-1242	0.10	U
12672-29-6	Aroclor-1248	0.93	
11097-69-1	Aroclor-1254	0.51	
11096-82-5	Aroclor-1260	0.10	U

Lab Name: Aquatec, Inc.

Contract:

Phase Type:

Phase Weight:

Dilution Factor:

Injection Volume:

91082

BIOTA

10.0

1.0

10.0

(9)

(uL)

EPA SAMPLE NO.

K40350R

Lab Code: AQUAI

Case: BIO SDG: 42788

Lab Sample ID: 213381

Date Received: 03/08/94

Date Extracted: 03/25/94

Date Analyzed:

Sulfur Clean-up: N (Y/N)

04/07/94

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	Q
12674-11-2	Aroclor-1016	0.50	U T
11104-28-2	Aroclor-1221	0.50	UJ
11141-16-5	Aroclor-1232	0.50	U J
53469-21-9	Aroclor-1242	0.50	UJ
12672-29-6	Aroclor-1248	4.6	7
11097-69-1	Aroclor-1254	2.6	J
11096-82-5	Aroclor-1260	0.50	n 2

EPA SAMPLE NO.

K40351F

Lab Name: Aquatec, Inc. Lab Code: AQUAI

Phase Type: BIOTA Lab Sample ID: 213383

Phase Weight: 10.0 (g) Date Received: 03/08/94

Injection Volume: 1.0 (uL) Date Extracted: 03/25/94

Dilution Factor: 2.0 Date Analyzed: 04/07/94

Sulfur Clean-up: N (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	Q
12674-11-2	Aroclor-1016	0.10	U ゴ
11104-28-2	Aroclor-1221	0.10	UJ
11141-16-5	Aroclor-1232	0.10	UJ
53469-21-9	Aroclor-1242	0.36	<u>ت</u>
12672-29-6	Aroclor-1248	0.10	UJ
11097-69-1	Aroclor-1254	0.90	<u> </u>
11096-82-5	Aroclor-1260	0.092	リブ

EPA SAMPLE NO. K40351R Lab Name: Aquatec, Inc. Lab Code: AQUAI 91082 Contract: Case: BIO SDG: __ 42788 Phase Type: **BIOTA** Lab Sample ID: 213384 Phase Weight: 10.0 (g) 03/08/94 Date Received: Injection Volume: 1.0 (uL) Date Extracted: 03/25/94 Dilution Factor: 10.0 Date Analyzed: 04/07/94 Sulfur Clean-up: (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	<u>a</u>
12674-11-2	Aroclor-1016	0.50	U
11104-28-2	Aroclor-1221	0.50	U ·
11141-16-5	Aroclor-1232	0.50	U :
53469-21-9	Aroclor-1242	1.3	
12672-29-6	Aroclor-1248	0.50	U
11097-69-1	Aroclor-1254	3.4	-
11096-82-5	Aroclor-1260	0.86	

EPA SAMPLE NO.

K40352F Lab Name: Aquatec, Inc. Lab Code: **AQUAI** SDG: 91082 BIO 42788 Contract: Case: **BIOTA** Phase Type: Lab Sample ID: 213386 10.0 Phase Weight: (0) Date Received: 03/08/94 Injection Volume: 1.0 (uL) Date Extracted: 03/25/94 Dilution Factor: 2.0 Date Analyzed: 04/18/94 Sulfur Clean-up: (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	
12674-11-2	Aroclor-1016	0.29	
11104-28-2	Aroclor-1221	0.10	l
11141-16-5	Aroclor-1232	0.10	l
53469-21-9	Arocior-1242	0.10	l
12672-29-6	Aroclor-1248	0.10	
11097-69-1	Arocior-1254	0.89	
11096-82-5	Aroclor-1260	0.14	

EPA SAMPLE NO. K40352R Lab Code: Lab Name: Aquatec, Inc. **AQUAI** Contract: 91082 Case: SDG: ____ BIO 42788 Phase Type: **BIOTA** Lab Sample ID: 213387 Phase Weight: 10.0 Date Received: **(g)** 03/08/94 Injection Volume: 1.0 (uL) Date Extracted: 03/25/94 Dilution Factor: 04/07/94 10.0 Date Analyzed: Sulfur Clean-up: N (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	0
12674-11-2	Aroclor-1016	1.3	
11104-28-2	Aroclor-1221	0.50	U
11141-16-5	Aroclor-1232	0.50	U
53469-21-9	Aroclor-1242	0.50	U
12672-29-6	Aroclor-1248	0.50	U
11097-69-1	Aroclor-1254	4.2	
11096-82-5	Aroclor-1260	0.58	

EPA SAMPLE NO.

K40353F

Lab Name: Aquatec, Inc. Lab Code: AQUAI

Contract: 91082 Case: BIO SDG: 42788

Lab Sample ID: Phase Type: _ **BIOTA** 213389 Phase Weight: 10.0 (g) Date Received: 03/08/94 Injection Volume: 1.0 (uL) 03/25/94 Date Extracted: Dilution Factor: 5.0 Date Analyzed: 04/18/94

Sulfur Clean-up: N (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	
12674-11-2	Aroclor-1016	1.0	
11104-28-2	Aroclor-1221	0.25	ι
11141-16-5	Aroclor-1232	0.25	Ĺ
53469-21-9	Aroclor-1242	0.25	į
12672-29-6	Aroclor-1248	0.25	
11097-69-1	Aroclor-1254	2.6	
11096-82-5	Aroclor-1260	0.29	

Lab Code:

Case:

K40353R

AQUAI

BIO SDG: 42788

Lab Sample ID: 213390

EPA SAMPLE NO.

Phase Type: **BIOTA** Lab Sample ID: 213390 Phase Weight: _ 10.0 Date Received: 03/08/94 (g) Injection Volume: 1.0 (uL) Date Extracted: 03/25/94 Dilution Factor: 10.0 04/18/94 Date Analyzed:

Lab Name: Aquatec, Inc.

91082

Contract:

Sulfur Clean-up: N (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	(
12674-11-2	Aroclor-1016	1.7	
11104-28-2	Aroclor-1221	0.50	ι
11141-16-5	Aroclor-1232	0.50	l
53469-21-9	Aroclor-1242	0.50	t
12672-29-6	Aroclor-1248	0.50	l
11097-69-1	Aroclor-1254	5.0	
11096-82-5	Aroclor-1260	0.53	

EPA SAMPLE NO. K40354F Lab Code: AQUAI Lab Name: Aquatec, Inc. 91082 BIO Contract: _ Case: _ SDG: _ 42788 **BIOTA** Lab Sample ID: Phase Type: 213392 Phase Weight: 10.0 Date Received: 03/08/94 (g) Injection Volume: 1.0 (uL) Date Extracted: 03/25/94 Dilution Factor: _ 2.0 Date Analyzed: 04/19/94 Sulfur Clean-up: Ν (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	0
12674-11-2	Aroclor-1016	0.46	
11104-28-2	Aroclor-1221	0.10	U
11141-16-5	Aroclor-1232	0.10	U
53469-21-9	Aroclor-1242	0.10	U
12672-29-6	Aroclor-1248	0.10	U
11097-69-1	Arocior-1254	1.1	
11096-82-5	Aroclor-1260	0.10	

EPA SAMPLE NO. K40354R Lab Name: Aquatec, Inc. Lab Code: AQUAI Contract: _ Case: _ BIO 91082 SDG: 42788 Phase Type: BIOTA Lab Sample ID: 213393 Phase Weight: 10.0 Date Received: 03/08/94 (g) Injection Volume: 1.0 (uL) Date Extracted: 03/25/94 Dilution Factor: 5.0 Date Analyzed: 04/19/94 Sulfur Clean-up: Ν (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	C
	······································		
12674-11-2	Aroclor-1016	1.2	
11104-28-2	Aroclor-1221	0.25	ι
11141-16-5	Aroclor-1232	0.25	ι
53469-21-9	Aroclor-1242	0.25	·
12672-29-6	Aroclor-1248	0.25	ι
11097-69-1	Aroclor-1254	3.1	
11096-82-5	Aroclor-1260	0.36	

EPA SAMPLE NO.

K40359F

Lab Name: Aquatec, Inc. Lab Code: AQUAI

Contract: 91082 Case: BIO SDG: 42788

 Phase Type:
 BIOTA
 Lab Sample ID:
 213395

 Phase Weight:
 10.0
 (g)
 Date Received:
 03/08/94

 Injection Volume:
 1.0
 (uL)
 Date Extracted:
 03/25/94

Dilution Factor: 10.0 Date Analyzed: 04/19/94 Sulfur Clean-up: N (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	
12674-11-2	Aroclor-1016	0.50	(
11104-28-2	Aroclor-1221	0.50	
11141-16-5	Aroclor-1232	0.50	l
53469-21-9	Aroclor-1242	0.50	Į
12672-29-6	Aroclor-1248	4.5	
11097-69-1	Aroclor-1254	1.2	
11096-82-5	Aroclor-1260	0.30	

Dilution Factor:

20.0

EPA SAMPLE NO. K40359R Lab Name: Aquatec, Inc. Lab Code: AQUAI Contract: 91082 Case: _ BIO SDG: 42788 Phase Type: _ **BIOTA** Lab Sample ID: 213396 Phase Weight: 10.0 (g) Date Received: 03/08/94 Injection Volume: 1.0 (uL) Date Extracted: 03/25/94

Date Analyzed:

Sulfur Clean-up:

04/19/94

N

(Y/N)

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	C
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	1.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	9.6	
11097-69-1	Aroclor-1254	2.5	
11096-82-5	Aroclor-1260	0.64	J

EPA SAMPLE NO.

K40361F

Lab Name: Aquatec, Inc. Lab Code: AQUAI

Contract: 91082 Case: BIO SDG: 42788

Lab Sample ID: Phase Type: **BIOTA** 213398 Phase Weight: Date Received: 10.0 03/08/94 (g) Injection Volume: 1.0 (uL) Date Extracted: 03/25/94 Dilution Factor: _ 20.0 Date Analyzed: 04/19/94

Sulfur Clean-up: N (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	Q
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	1.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	11	
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	6.2	
11096-82-5	Aroclor-1260	1.0	U

EPA SAMPLE NO.

K40361R

Lab Name: Aquatec, Inc.

Contract:

91082

Lab Code: AQUAI

Case:

SDG: 42788

Phase Type: **BIOTA** Phase Weight: 10.0 (g)

Lab Sample ID: Date Received:

BIO

213399

1.0 Injection Volume: (uL) Date Extracted:

03/08/94 03/25/94

Dilution Factor: __ 20.0 Date Analyzed: 04/19/94

Sulfur Clean-up:

(Y/N)

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	
12674-11-2	Aroclor-1016	1.0	l
11104-28-2	Aroclor-1221	1.0	ι
11141-16-5	Aroclor-1232	1.0	Ĺ
53469-21-9	Aroclor-1242	8.6	
12672-29-6	Aroclor-1248	1.0	i
11097-69-1	Aroclor-1254	5.1	
11096-82-5	Aroclor-1260	1.0	U

EPA SAMPLE NO. K40362F Lab Code: Lab Name: Aquatec, inc. **AQUAI** 91082 SDG: 42788 Contract: Case: Phase Type: **BIOTA** Lab Sample ID: 213401 10.0 Date Received: Phase Weight: **(g)** 03/08/94 Injection Volume: 1.0 (uL) Date Extracted: 03/25/94 Dilution Factor: 10.0 Date Analyzed: 04/19/94 (Y/N) Sulfur Clean-up: N

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	
12674-11-2	Aroclor-1016	0.50	(
11104-28-2	Aroclor-1221	0.50	
11141-16-5	Aroclor-1232	0.50	
53469-21-9	Aroclor-1242	0.50	$\overline{}$
12672-29-6	Aroclor-1248	5.1	
11097-69-1	Aroclor-1254	2.8	
11096-82-5	Aroclor-1260	0.50	$\overline{}$

EPA SAMPLE NO.

K40362R AQUAI Lab Name: Aquatec, Inc. Lab Code: 91082 Case: BIO SDG: 42788 Contract: Phase Type: **BIOTA** Lab Sample ID: 213402 10.0 Phase Weight: __ **(g)** Date Received: 03/08/94 Injection Volume: 1.0 (uL) Date Extracted: 03/25/94 Dilution Factor: __ 10.0 Date Analyzed: 04/19/94 Sulfur Clean-up: Ν (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	(
12674-11-2	Aroclor-1016	0.50	·
11104-28-2	Aroclor-1221	0.50	Į
11141-16-5	Aroclor-1232	0.50	Į
53469-21-9	Aroclor-1242	0.50	
12672-29-6	Aroclor-1248	5.2	
11097-69-1	Aroclor-1254	2.8	
11096-82-5	Aroclor-1260	0.50	

EPA SAMPLE NO. K40363F Lab Name: Aquatec, Inc. Lab Code: AQUAI Contract: 91082 Case: BIO SDG: 42788 Phase Type: _ BIOTA Lab Sample ID: 213404 Phase Weight: 10.0 Date Received: (g) 03/08/94 Injection Volume: (uL) Date Extracted: 1.0 03/25/94 Dilution Factor: 2.0 Date Analyzed: 04/19/94 Sulfur Clean-up: Ν (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	0
12674-11-2	Aroclor-1016	0.10	U
11104-28-2	Aroclor-1221	0.10	υ
11141-16-5	Aroclor-1232	0.10	U
53469-21-9	Aroclor-1242	0.10	υ
12672-29-6	Aroclor-1248	1.3	
11097-69-1	Aroclor-1254	0.84	
11096-82-5	Aroclor-1260	0.10	U

EPA SAMPLE NO. K40363R Lab Name: Aquatec, Inc. Lab Code: **IAUDA** Contract: 91082 Case: BIO SDG: _ 42788 Phase Type: **BIOTA** Lab Sample ID: 213405 Phase Weight: 10.0 Date Received: 03/08/94 (g) Injection Volume: 1.0 (uL) Date Extracted: 03/25/94 10.0 Dilution Factor: Date Analyzed: 04/19/94 Sulfur Clean-up: Ν (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	(
		(IIIg/Kg/	
12674-11-2	Aroclor-1016	0.50	
11104-28-2	Aroclor-1221	0.50	
11141-16-5	Aroclor-1232	0.50	_ [
53469-21-9	Aroclor-1242	0.50	
12672-29-6	Aroclor-1248	4.3	
11097-69-1	Aroclor-1254	2.0	
11096-82-5	Aroclor-1260	0.42	

EPA SAMPLE NO. K40364F Lab Name: Aquatec, Inc. Lab Code: AQUAI 91082 BIO SDG: 42788 Contract: Case: **BIOTA** Lab Sample ID: 213407 Phase Type: 10.0 **(g)** Date Received: 03/08/94 Phase Weight: Date Extracted: 03/25/94 Injection Volume: 1.0 (uL) Date Analyzed: 04/19/94 5.0 Dilution Factor: _ Sulfur Clean-up: Ν (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	٥
12674-11-2	Aroclor-1016	0.25	U
11104-28-2	Aroclor-1221	0.25	υ
11141-16-5	Aroclor-1232	0.25	U
53469-21-9	Aroclor-1242	0.25	U
12672-29-6	Aroclor-1248	1.8	
11097-69-1	Aroclor-1254	1.2	
11096-82-5	Aroclor-1260	0.25	U

EPA SAMPLE NO.

Lab Name: Aquatec, Inc. Lab Code: AQUAI

Contract: 91082 Case: BIO SDG: 42788

Phase Type: BIOTA Lab Sample ID: 213408

Phase Weight: 10.0 (g) Date Received: 03/08/94

Injection Volume: 1.0 (uL) Date Extracted: 03/25/94

Dilution Factor: 10.0 Date Analyzed: 04/19/94

Sulfur Clean-up: N (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	C
12674-11-2	Aroclor-1016	0.50	_ ,
11104-28-2	Aroclor-1221	0.50	L
11141-16-5	Aroclor-1232	0.50	
53469-21-9	Aroclor-1242	0.50	
12672-29-6	Aroclor-1248	3.0	
11097-69-1	Aroclor-1254	2.0	
11096-82-5	Aroclor-1260	0.50	ί

EPA SAMPLE NO.

K40369F

Lab Name: Aquatec, Inc. Lab Code: AQUAI

Contract: 91082 Case: BIO SDG: 42788

Phase Type: BIOTA Lab Sample ID: 213410

Phase Weight: 10.0 (g) Date Received: 03/08/94

Injection Volume: 1.0 (uL) Date Extracted: 03/25/94

Dilution Factor: 2.0 Date Analyzed: 04/19/94 Sulfur Clean-up: N (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	
12674-11-2	Arocior-1016	0.71	
11104-28-2	Aroclor-1221	0.10	U
11141-16-5	Aroclor-1232	0.10	U
53469-21-9	Aroclor-1242	0.10	U
12672-29-6	Aroclor-1248	0.10	Ų
11097-69-1	Aroclor-1254	1.4	
11096-82-5	Aroclor-1260	0.15	

Lab Code:

Case:

BIO

EPA SAMPLE NO. K40369R **AQUAI** SDG: 42788 Lab Sample ID: 213411 Date Received: 03/08/94

BIOTA Phase Type: 10.0 Phase Weight: (g) Injection Volume: 1.0 (uL) Dilution Factor: 5.0

Aquatec, Inc.

91082

Lab Name:

Contract:

Date Extracted: 03/25/94 04/19/94 Date Analyzed:

Sulfur Clean-up: N (Y/N)

CAS NO. COM	COMPOUND	CONCENTRATION (mg/Kg)	
12674-11-2	Aroclor-1016	0.87	
11104-28-2	Aroclor-1221	0.25	U
11141-16-5	Aroclor-1232	0.25	U
53469-21-9	Aroclor-1242	0.25	U
12672-29-6	Aroclor-1248	0.25	U
11097-69-1	Aroclor-1254	1.7	
11096-82-5	Aroclor-1260	0.25	J

Lab Code:

Case: _

AQUAI

BIO

EPA SAMPLE NO.

K40370F

SDG: 42788

ID: 213413

BIOTA Phase Type: Lab Sample ID: Phase Weight: 10.0 (g) **Date Received:** 03/08/94 Injection Volume: (uL) Date Extracted: 1.0 03/25/94 Dilution Factor: 1.0 Date Analyzed: 04/19/94

Lab Name: Aquatec, Inc.

91082

Contract:

Sulfur Clean-up: N (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	a
12674-11-2	Aroclor-1016	0.71	
11104-28-2	Aroclor-1221	0.050	U
11141-16-5	Aroclor-1232	0.050	U
53469-21-9	Aroclor-1242	0.050	U
12672-29-6	Aroclor-1248	0.050	U
11097-69-1	Aroclor-1254	0.77	
11096-82-5	Aroclor-1260	0.050	υ
·			

EPA SAMPLE NO. K40370R Lab Name: Aquatec, Inc. Lab Code: AQUAI Case: _ 91082 BIO 42788 Contract: SDG: __ Phase Type: **BIOTA** Lab Sample ID: 213414 10.0 Phase Weight: Date Received: **(g)** 03/08/94 Injection Volume: 1.0 (uL) Date Extracted: 03/25/94 Dilution Factor: 5.0 04/19/94 Date Analyzed:

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	
12674-11-2	Aroclor-1016	0.25	ι
11104-28-2	Aroclor-1221	0.25	ī
11141-16-5	Aroclor-1232	0.25	l
53469-21-9	Aroclor-1242	2.0	
12672-29-6	Aroclor-1248	0.25	Ų
11097-69-1	Aroclor-1254	2.3	
11096-82-5	Aroclor-1260	0.25	l

Sulfur Clean-up:

N

(Y/N)

PESTICIDE ANALYSES

Introduction

Analyses were performed according to the USEPA SW-846 Method 8081.

The data review process is intended to evaluate the data on a technical basis. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with National Functional Guidelines:

- U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
- J The compound was positively identified; however, the associated numerical value is an estimated concentration only.
- B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.
- N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.
- JN The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.
- E The compound was quantitated above the calibration range.
- D Concentration is based on a diluted sample analysis.
- C Identification confirmed by GC/MS.
- UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.
- R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant QC problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC test, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

Data Assessment

1. Holding Time

The holding time for pesticide extracts is 40 days from extraction to analysis. All samples were originally analyzed within the specified holding time. Dilutions for samples K40133R, K40135F, K40135R, K40136R, K40137R, K40138R, 40140R, K40350R, K40351R, K40353R, K40359F, K40359R, K40361F, K40361R, K40362F, K40362R, K40363R and K40364R were, however, analyzed over the specified holding time. All data for the dilutions have been qualified as estimated.

2. Blank Contamination

Quality assurance blanks, i.e., method and instrument blanks, are prepared to identify any contamination which may have been introduced into the samples during sample preparation or analysis. Method blanks measure laboratory contamination during preparation. Instrument blanks measure instrument contamination and sample cross-contamination.

No target compounds were detected in either the method blanks or instrument blanks.

3. System Performance

The resolution and compound breakdown was within acceptable limits for both columns.

4. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of giving acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument is giving satisfactory daily performance.

4.1 Initial Calibration

A maximum RSD of 20% is allowed. All initial calibrations were within the specified limit.

4.2 Continuing Calibration

A maximum RPD of 25% is allowed. All continuing calibrations were within the specified limit.

5. Surrogates / System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique.

Recoveries were below acceptable control limits for one surrogate in samples K40138R, K40137RDL and K40138RDL. No qualifiers were added to these samples based on the deviation. All other surrogate recoveries were within acceptable control limits.

6. Compound Identification

K40133F

Aldrin

The retention times of pesticide/PCB compounds must fall within the calculated retention time windows for both the primary and confirmation columns.

The quantitated concentrations between the two columns exceeded the 25% difference limit for the following samples and compounds:

50.7%

K40133F	Alarin	50.7%
	gamma-Chlordane	100.0%
	4,4'-DDT	400.0%
K40133R	2-Bromobiphenyl	104.3%
	Aldrin	46.7%
	Heptachlor Epoxide	28.6%
	4,4'-DDE	206.8%
K40133RDL	Aldrin	55.6%
	gamma-Chlordane	128.1%
	trans-Nonachlor	333.3%
	4,4'-DDT	574.4%
K40135F	Aldrin	63.6%
	gamma-Chlordane	97.8%
	4,4'-DDE	40.0%
	4,4'-DDT	85.4%
K40135FDL	Aldrin	54.5%
	gamma-Chlordane	116.7%
	4,4'-DDT	641.9%
K40135R	2-Bromobiphenyl	113.3%
	Aldrin	59.6%
	gamma-Chlordane	90.0%
K40135RDL	Aldrin	53.8%
	gamma-Chlordane	120.9%
	4,4'-DDT	600.0%
K40136F	Aldrin	53.1%
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	gamma-Chlordane	93.8%
	gailling officiating	20.0%

K40136R	2-Bromobiphenyl Aldrin Heptachlor Epoxide gamma-Chlordane 4,4'-DDT	66.7% 50.0% 26.7% 103.4% 491.8%
K40136RDL	Aldrin gamma-Chlordane	52.0% 94.8%
K40137F	Aldrin gamma-Chlordane	62.5% 100.0%
K40137R	2-Bromobiphenyl Aldrin gamma-Chlordane	92.3% 66.7% 102.9%
K40137RDL	Aldrin gamma-Chlordane 4,4'-DDT	55.6% 133.3% 580.0%
K40138F	Aldrin gamma-Chlordane alpha-Chlordane	59.6% 85.7% 39.3%
K40138R	2-Bromobiphenyl Aldrin gamma-Chlordane 4,4'-DDT	80.0% 58.3% 92.3% 504.2%
K40138RDL	2-Bromobiphenyl Aldrin gamma-Chlordane 4,4'-DDT	80.0% 66.7% 118.2% 587.5%
K40140F	Aldrin gamma-Chlordane	65.4% 80.9%
K40140R	2-Bromobiphenyl Aldrin Heptachlor Epoxide gamma-Chlordane 4,4'-DDT	64.0% 62.5% 27.8% 91.2% 556.3%
K40140RDL	2-Bromobiphenyl Aldrin gamma-Chlordane 4,4'-DDT	81.8% 58.3% 125.0% 602.7%
K40350F	Aldrin Heptachlor Epoxide gamma-Chlordane 4,4'-DDE	32.3% 36.8% 70.0% 58.3%

K40350R	Heptachlor Epoxide gamma-Chlordane 4,4'-DDE 4,4'-DDT	46.4% 66.7% 33.3% 556.3%
K40350RDL	Heptachlor Epoxide gamma-Chlordane 4,4'-DDE 4,4'-DDT	36.8% 95.8% 35.7% 674.2%
K40351F	Aldrin 4,4'-DDT	105.9% 508.3%
K40351R	Aldrin Heptachlor Epoxide gamma-Chlordane 4,4'-DDE 4,4'-DDT	98.8% 27.9% 203.4% 37.9% 394.3%
K40351RDL	Aldrin gamma-Chlordane 4,4'-DDE 4,4'-DDT	92.3% 233.3% 48.5% 441.0%
K40352F	Aldrin 4,4'-DDE	57.1% 34.5%
K40352R	Aldrin	54.2%
K40353F	Aldrin gamma-Chlordane 4,4'-DDE 4,4'-DDT	61.9% 158.8% 43.6% 483.3%
K40353R	Aldrin 4,4'-DDE 4,4'-DDD 4,4'-DDT	62.2% 27.3% 26.3% 468.2%
K40353RDL	Aldrin gamma-Chlordane 4,4'-DDE 4,4'-DDT	53.8% 209.7% 33.3% 558.5%
K40354F	Aldrin gamma-Chlordane 4,4'-DDE 4,4'-DDT	52.2% 127.8% 37.9% 400.0%
K40354R	Aldrin gamma-Chlordane 4,4'-DDD	45.8% 143.5% 33.3%

K40359F	Aldrin Heptachlor Epoxide gamma-Chlordane 4,4'-DDT	27.7% 41.2% 108.0% 605.9%
K40359FDL	Heptachlor Epoxide gamma-Chlordane 4,4'-DDE	32.3% 133.3% 104.9%
K40359R	Heptachlor Epoxide gamma-Chlordane 4,4'-DDE 4,4'-DDT	44.4% 108.5% 41.3% 519.0%
K40359RDL	Heptachlor Epoxide gamma-Chlordane 4,4'-DDE	41.7% 128.1% 38.5%
K40361F	Aldrin Heptachlor Epoxide 4,4'-DDE 4,4'-DDT	28.6% 38.5% 30.8% 519.0%
K40361FDL	gamma-Chlordane	110.0%
K40361R	Aldrin Heptachlor Epoxide gamma-Chlordane 4,4'-DDE 4,4'-DDT	31.6% 33.3% 113.1% 41.7% 525.0%
K40361RDL	Aldrin Heptachlor Epoxide gamma-Chlordane 4,4'-DDE 4,4'-DDT	27.6% 31.3% 125.4% 31.3% 680.5%
K40362F	Aldrin Heptachlor Epoxide gamma-Chlordane 4,4'-DDE 4,4'-DDT	27.3% 29.5% 76.9% 30.0% 592.3%
K40362FDL	Aldrin gamma-Chlordane 4,4'-DDE 4,4'-DDD 4,4'-DDT	28.6% 102.6% 36.4% 33.3% 726.1%
K40362R	2-Bromobiphenyl gamma-Chlordane 4,4'-DDD 4,4'-DDT	30.0% 27.3% 105.7% 660.0%

K40362RDL	2-Bromobiphenyl Heptachlor Epoxide gamma-Chlordane 4,4'-DDT	41.0% 1225.3% 121.6% 726.1%
K40363F	Aldrin 4,4'-DDD 4,4'-DDT	28.6% 33.3% 627.3%
K40363R	Heptachlor Epoxide gamma-Chlordane 4,4'-DDE 4,4'-DDT	43.2% 80.0% 40.0% 552.2%
K40363RDL	Heptachlor Epoxide gamma-Chlordane alpha-Chlordane 4,4'-DDE 4,4'-DDD 4,4'-DDT	36.0% 97.0% 31.3% 48.6% 34.6% 709.5%
K40364F	Aldrin Heptachlor Epoxide gamma-Chlordane 4,4'-DDE 4,4'-DDT	25.8% 38.2% 80.0% 40.0% 630.8%
K40364R	Heptachlor Epoxide gamma-Chlordane 4,4'-DDE 4,4'-DDT	44.2% 84.4% 31.6% 581.8%
K40364RDL	Heptachlor Epoxide gamma-Chlordane 4,4'-DDE 4,4'-DDD	34.4% 105.9% 48.2% 34.5%
K40369F	Aldrin gamma-Chlordane 4,4'-DDT	81.3% 175.0% 585.7%
K40369R	Heptachlor Epoxide gamma-Chlordane 4,4'-DDT	28.1% 200.0% 358.3%
K40370F	4,4'-DDT	291.7%
K40370R	Aldrin gamma-Chlordane 4,4'-DDE 4,4'-DDT	102.3% 205.9% 46.3% 490.9%

All data in the samples for the compounds listed has been qualified. Data with %D values between 25 and 50% has been qualified as estimated, J. All data with %D values between 50 and 90% has been qualified as estimated with presumptive evidence of presence, JN. All data with %D values greater than 90% has been rejected.

7. Matrix Spike/Matrix Spike Duplicate

Matrix spike and matrix spike duplicate data are used to assess the precision and accuracy of the analytical method.

Recovery of Aldrin in both the fillet and carcass matrix spike and matrix spike duplicate samples were above the acceptable control limit. Recovery for Dieldrin was below the acceptable control limits in the original analysis of the carcass matrix spike and above the control limits in the diluted analysis. The deviations in spike recoveries can be attributed to interference form PCBs present in the spiking solution. Matrix spike blank recoveries were within acceptable control limits in one of the two MSBs and slightly below control limits in the remaining MSB. No qualifiers have been added to the samples based on matrix spike recoveries.

8. General Comments

The recommended data usage for the sample dilutions is as follows:

K40133R and K40133RDL

The data from sample K40133R should be used for all compounds except 2-Bromobiphenyl, Aldrin, Heptachlor Epoxide and 4,4'-DDE. The data from the dilution K40133RDL should be used these compounds.

K40135F and K40135FDL

The data from sample K40135F should be used for all compounds except Aldrin, Heptachlor Epoxide and 4,4'-DDE. The data from the dilution K40135FDL should be used these compounds.

K40135R and K40135RDL

The data from sample K40135R should be used for all compounds except 2-Bromobiphenyl, Aldrin, Heptachlor Epoxide and 4,4'-DDE. The data from the dilution K40135RDL should be used these compounds.

K40136R and K40136RDL

The data from sample K40136R should be used for all compounds except Aldrin, Heptachlor Epoxide, 4,4'-DDE and 4,4'-DDT. The data from the dilution K40136RDL should be used these compounds.

K40137R and K40137RDL

The data from sample K40137R should be used for all compounds except 2-Bromobiphenyl, Aldrin, Heptachlor Epoxide and 4,4'-DDE. The data from the dilution K40137RDL should be used these compounds.

K40138R and K40138RDL

The data from sample K40138R should be used for all compounds except Aldrin, Heptachlor Epoxide and 4,4'-DDE. The data from the dilution K40138RDL should be used these compounds.

K40140R and K40140RDL

The data from sample K40140R should be used for all compounds except Aldrin. The data from the dilution K40140RDL should be used this compound.

K40350R and K40350RDL

The data from sample K40350R should be used for all compounds except Aldrin. The data from the dilution K40350RDL should be used this compound.

K40351R and K40351RDL

The data from sample K40351R should be used for all compounds except Heptachlor Epoxide. The data from the dilution K40351RDL should be used this compound.

K40353R and K40353RDL

The data from sample K40353R should be used for all compounds except Heptachlor Epoxide. The data from the dilution K40353RDL should be used this compound.

K40359F and K40359FDL

The data from sample K40359F should be used for all compounds except Aldrin. The data from the dilution K40359FDL should be used this compound.

K40359R and K40359RDL

The data from sample K40359R should be used for all compounds except Aldrin, Heptachlor Epoxide and 4,4'-DDT. The data from the dilution K40359RDL should be used these compounds.

K40361F and K40361FDL

The data from sample K40361F should be used for all compounds except Aldrin, Heptachlor Epoxide and 4,4'-DDT. The data from the dilution K40361FDL should be used these compounds.

K40361R and K40361RDL

The data from sample K40361R should be used for all compounds except Aldrin and Heptachlor Epoxide. The data from the dilution K40361RDL should be used these compounds.

K40362F and K40362FDL

The data from sample K40362F should be used for all compounds except Aldrin. The data from the dilution K40362FDL should be used this compound.

K40362R and K40362RDL

The data from sample K40362R should be used for all compounds except Aldrin and 4,4'-DDD. The data from the dilution K40362RDL should be used these compounds.

K40363R and K40363RDL

The data from sample K40363R should be used for all compounds except Aldrin. The data from the dilution K40363RDL should be used this compound.

K40364R and K40364RDL

The data from sample K40364R should be used for all compounds except Aldrin and 4,4'-DDT. The data from the dilution K40364RDL should be used these compounds.

9. System Performance and Overall Assessment

Overall system performance was acceptable. Other than those deviations specifically mentioned in this review, the overall data quality is within the guidelines listed in the analytical method.

Data Validation Checksheets

Pesticide Data Validation Checklist

	YES	NO	NA
Data Completeness and Deliverables			
Is there a narrative or cover letter present?	<u> </u>		
Are the samples numbers included in the narrative?	X		
Are the sample chain-of-custodies present?	X		
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?		X	
Holding Times			
Have any holding times been exceeded?	X		
Surrogate Recovery			
Are the surrogate recovery forms present?	X		
Are all the samples listed on the appropriate surrogate recovery form?	×		
Are the outliers correctly marked with an asterisk?	X		
Were recoveries of TCMX or DCB outside of specified limits for any sample or blank?	X		
If yes, were the samples reanalyzed?		X	
Were the method blanks reanalyzed?			X
Matrix Spikes			
Is there a matrix spike recovery form present?	X		
Were matrix spikes analyzed at the required frequency?	X		
How many spike recoveries were outside of QC limits?			
5_ out of16			
How many RPDs for matrix spike and matrix spike duplicate were outside of QC limits?			
1 out of8			
Blanks			
is the method blank summary form present?	X		
Has a method blank been analyzed for each set of samples or for each 20 samples, whichever is more frequent?	X		
Has an instrument blank been analyzed at the beginning of each 12 hour period following the initial calibration?	X		

Pesticide/PCB Data Validation Checklist - Page 2

	YES	NO	NA
Is the chromatographic performance acceptable for each instrument?	<u> </u>		
Do any method/reagent/instrument blanks have positive results?		X	
Do any trip/field/rinse blanks have positive results?			X
Are there field/rinse/equipment blanks associated with every sample?		X	
Calibration and GC Performance			
Are the following chromatograms and data printouts pre blanks, and MS/MSD?	sent for	all samples,	
peak resolution check	X		
performance evaluation mixtures (BCS)	X		
Toxaphene multipoint calibration	X		
Pesticide/PBB multipoint calibration	X		
Pesticide/PBB mid-point standard	X		
instrument blanks	X		
Are Forms VI 1-4 present and complete for each column and analytical sequence?	x		
Are the linearity criteria for the initial analyses if INDA and INDB within limits for both columns?	X		
Is the resolution between any two adjacent peaks in the resolution check mixture > 60% for both columns?	X		
Is Form VII-1 present for each BCS analyzed for both columns?	×		
Has the individual % breakdown exceeded 20% on either column for 4,4'-DDT		×	
Are all the relative percent difference (RPD) values for all PEM analytes < 25%?	X		
Is Form VII-2 present and complete for each mid-point standard analyzed?	X		
Are RPD values for all compounds < 25%?	X		
Analytical Sequence Check			
ls Form VIII present and complete for each column and each period of analyses?	X		

Pesticide/PCB Data Validation Checklist - Page 3

	YES	NO	NA
Was the proper analytical sequence followed?	X		
Cleanup Efficiency Verification			
Is Form IX-1 present for each lot of Florisil cartridges used?	<u> </u>	·	
Are all samples listed on the form?	X _.		
If GPC cleanup was performed, is Form IX-2 present?			X
Are percent recoveries of the compounds used to check the efficiency of the cleanup procedure within QC limits for:			
Florisil cartridge check (80-120%)	X		
GPC calibration (80-110%)			X
Pesticide/PBB Identification			
Is a Form X present for every sample in which a pesticide or PCB was detected?	<u></u>	<u> </u>	
Was GC/MS confirmation provided when required?			X
Is the percent difference (%D) calculated for the positive sample results on the two columns less than 25%?		×	
Were there any false negatives?		X	
Compound Quantitation and Reported Detection Limit	8	· · · · · · · · · · · · · · · · · · ·	
Are the reporting limits adjusted to reflect sample dilutions, and for soils, sample moisture?	X		
Chromatogram Quality			
Were the baselines stable?	X		
Were any electronegative displacement (negative peaks) or unusual peaks detected?		X	, ::
Field Duplicates			
Where field duplicates submitted with the samples?		<u> </u>	

Pesticide/PBB Qualifier Summary Holding Time and Surrogates

Sample ID	Holding	Surrogates	- Column 1	Surrogates - Column 2		
	Time	TCX	DCB	TCX	DÇB	
K40133F			ок	ОК	ОК	
K40133R						
K40133RDL	+6					
K40135F						
K40135FDL	+4					
K40135R						
K40135RDL	+4					
K40136F						
K40136R						
K40136RDL	+4					
K40137F	<u> </u>					
K40137R		↓ (58)				
K40137RDL	+4					
K40138F						
K40138R		↓ (59)				
K40138RDL	+4	↓ (57)				
K40140F						
K40140R						
K40140RDL	+4					
K40350F						
K40350FMS						
K40350FMSD						
K40350R						
K40350RDL	+ 4					
K40351F						
K40351R						
K40351RMS						
K40351RMSD						
K40351RDL	+4					
K40352F						
K40352R						

Sample ID	Holding	Surrogates	- Column 1	Surrogates - Column 2		
	Time	TCX	DCB	TCX	DCB	
K40353F						
K40353R						
K40353RDL	+4					
K40354F						
K40354R						
K40359F						
K40359FDL	+4					
K40359R	•					
K40359RDL	+7					
K40361F						
K40361FDL	+20					
K40361R						
K40361RDL	+ 7					
K40362F						
K40362FDL	+4					
K40362R						
K40362RDL	+4					
K40363F						
K40363R						
K40363RDL	+5					
K40364F						
K40364R						
K40364RDL	+5					
K40369F						
K40369R						
K40370F						
K40370R						

Surrogates: TCX Tetrachloro-m-xylene DCB Decachlorobiphenyl

Qualifiers:

Surrogate diluted out Recovery high Recovery low D

Unless otherwise noted, all samples are within specified limits.

Instrument: <u>HP2404</u> Column: <u>RTX-5</u>

Date:	4/16/94	4/16	4/17	4/17	4/17		
Time;	02:07	16:25	00:44	09:04	17:24		
	Initial Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cent. Cal.	Cont. Cal.	Cont. Cal.
	*RSD	%D	% D	% D	% D	%D	% D
2-Bromobiphenyl	ok	ok	ok	ok	ok		
3-Bromobiphenyl							
4-Bromobiphenyl							
Hexachiorobenzene							
gamma-BHC (Lindane)							
Aldrin							
Heptaclor epoxide							_
gamma-Chlordane							
alpha-Chiordane							
trans-Nonachlor							
4,4'-DDE							
Dieldrin							
4,4'-DDD							
cis-Nonachlor							
4,4'-DDT							
Hexabromobiphenyl (BP-6)							
Toxaphene							
Tetrachioro-m-xylene							
Decachlorobiphenyl							
ffected Samples:				1			
<u> </u>							

Instrument: <u>HP2404</u> Column: <u>RTX-35</u>

Date:	4/16/94	4/18	4/17	4/17	4717		
Time:	02:07	16:25	00:44	09:04	17:24		
	initial Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.
	%RSD	% D	%Đ	%D	% D	%D	% D
2-Bromobiphenyl	ok	ok	ok	ok	ok		
3-Bromobiphenyl							
4-Bromobiphenyl							
Hexachlorobenzene				·			
gamma-BHC (Lindane)							
Aldrin							
Heptaclor epoxide							
gamma-Chlordane							
alpha-Chlordane							
trans-Nonachlor							
4,4'-DDE							
Dieldrin							
4,4'-DDD							·
cis-Nonachlor							
4,4'-DDT							
Hexabromobiphenyl (BP-6)							
Toxaphene							
Tetrachloro-m-xylene]				
Decachlorobiphenyl							
iffected Samples:							
Γ							
							· · · · · · · · · · · · · · · · · · ·
<u> </u>							· · · · · · · · · · · · · · · · · · ·
<u> </u>							

Instrument: <u>HP2404</u> Column: <u>RTX-5</u>

Date:	4/20/94	4/21					
Time:	16;59	07:16					
	initial Cal:	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.
	%ASD	% D	%D	%D	%D	% D	%D
2-Bromobiphenyl	ok	ok					
3-Bromobiphenyl							
4-Bromobiphenyl				<u> </u>	<u> </u>		
Hexachlorobenzene				<u> </u>			<u> </u>
gamma-BHC (Lindane)							
Aldrin						<u> </u>	
Heptaclor epoxide							
gamma-Chlordane							
alpha-Chlordane							<u> </u>
trans-Nonachlor							
4,4'-DDE							
Dieldrin							
4,4'-DDD							
cis-Nonachlor							
4,4'-DDT							
Hexabromobiphenyl (BP-6)							
Toxaphene						- <u> </u>	
Tetrachioro-m-xylene							
Decachlorobiphenyl							
Affected Samples:]					
Γ							

Instrument: <u>HP2404</u> Column: <u>RTX-35</u>

Date:	4/20/94	4/21					
Time:	16:59	07:16					
	Initial Cat.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Gal.
	%RSD	% D	%D	% D	% D	%D	% D
2-Bromobiphenyl	ok	ok		<u> </u>			
3-Bromobiphenyl							
4-Bromobiphenyl							
Hexachiorobenzene							
gamma-BHC (Lindane)							
Aldrin							
Heptaclor epoxide							
gamma-Chlordane							
alpha-Chlordane							
trans-Nonachior							
4,4'-DDE							
Dieldrin							
4,4'-DDD							
cis-Nonachlor							
4,4'-DDT							
Hexabromobiphenyl (BP-6)							
Toxaphene							
Tetrachioro-m-xylene							
Decachlorobiphenyl							
Affected Samples:							
Γ							
Ī							
Γ							
-							·

Instrument: <u>HP2404</u> Column: <u>RTX-5</u>

Date:	4/26/94	4/28	4/28				
Time:	20:30	03:27	11:47				
	initial Cal.	Cont. Cal	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.
	%RSD	% D	%0	%D	% D	% D	% D
2-Bromobiphenyl	ok	ok	ok				
3-Bromobiphenyl							
4-Bromobiphenyl		<u> </u>	<u> </u>				
Hexachiorobenzene							
gamma-BHC (Lindane)			<u> </u>				
Aldrin							
Heptaclor epoxide							
gamma-Chlordane							
alpha-Chlordane							
trans-Nonachlor							
4,4'-DDE							
Dieldrin							
4,4'-DDD							
cis-Nonachlor							
4,4'-DDT							
Hexabromobiphenyl (BP-6)							
Toxaphene							
Tetrachioro-m-xylene							
Decachlorobiphenyl							
iffected Samples:							
Г							

Instrument: <u>HP2404</u> Column: <u>RTX-35</u>

Date:	4/26/94	4/28	4/28				
Time:	20:30	03:27	11:47				
	initial Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.
	%RSD	% D	%D	% D	%0	%D	% D
2-Bromobiphenyl	ok	ok	ok				
3-Bromobiphenyl							
4-Bromobiphenyl				<u> </u>	L		
Hexachlorobenzene		<u>-</u>					
gamma-BHC (Lindane)							
Aldrin		-					
Heptaclor epoxide							
gamma-Chlordane							
alpha-Chiordane							
trans-Nonachlor							
4,4'-DDE							
Dieldrin			!		·		
4,4'-DDD							
cis-Nonachlor							
4,4'-DDT							
Hexabromobiphenyl (BP-6)							
Toxaphene					- <u>-</u>		
Tetrachloro-m-xylene							
Decachlorobiphenyl							
iffected Samples:							
		·					

Instrument: <u>HP2404</u> Column: <u>RTX-5</u>

Date:	5/6/94	5/8	5/8	5/8	5/9	5/10	5/11
Time:	17:57	00;53	09:13	17:35	01:55	20:58	05:19
	initial Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont.	Cont. Cal.	Gont. Cai.
	%ASD	%D	% D	%D	%D	%D	% D
2-Bromobiphenyl	ok	ok	ok	ok	ok	ok	ok
3-Bromobiphenyl							
4-Bromobiphenyl							
Hexachlorobenzene							
gamma-BHC (Lindane)							
Aldrin			ļ				
Heptaclor epoxide							
gamma-Chlordane							
alpha-Chlordane							
trans-Nonachlor							
4,4'-DDE			_				
Dieldrin							
4,4'-DDD							
cis-Nonachlor							
4,4'-DDT							·
Hexabromobiphenyl (BP-6)							
Toxaphene							
Tetrachioro-m-xylene							·
Decachlorobiphenyl							
ffected Samples:							
Γ							
	-			-			
<u> </u>							

Instrument: <u>HP2404</u> Column: <u>RTX-35</u>

Date:	5/6/94	5/8	5/8	5/8	5/9	5/10	5/11
Time:	17:57	00:53	09:13	17;35	01:55	20:58	05:19
	initial Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.
	%ASD	% D	%D	% D	%D	% D	% D
2-Bromobiphenyl	ok	ok	ok	ok	ok	ok	ok
3-Bromobiphenyl							
4-Bromobiphenyl			! 				
Hexachlorobenzene							
gamma-BHC (Lindane)							
Aldrin							
Heptaclor epoxide							
gamma-Chlordane							
alpha-Chlordane							
trans-Nonachlor	<u> </u>						
4,4'-DDE							
Dieldrin							
4,4'-DDD							
cis-Nonachlor							
4,4'-DDT							
Hexabromobiphenyl (BP-6)							
Toxaphene							
Tetrachioro-m-xylene							
Decachlorobiphenyl							
Affected Samples:							
Γ							
Γ							

Instrument: <u>HP2404</u>
Column: <u>RTX-5</u>

Date:	5/17/94	5/24	5/24				
Time:	17:19	00;41	09:01				
	Initial Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.
	%RSD	% D	% D	% D	% D	%D	% D
2-Bromobiphenyl	ok	ok	ok				
3-Bromobiphenyl							
4-Bromobiphenyl							
Hexachlorobenzene							
gamma-BHC (Lindane)							
Aldrin							
Heptaclor epoxide							
gamma-Chlordane							
alpha-Chlordane							
trans-Nonachior							
4,4'-DDE							
Dieldrin							
4,4'-DDD							
cis-Nonachlor							
4,4'-DDT							
Hexabromobiphenyl (BP-6)							
Toxaphene							
Tetrachloro-m-xylene							
Decachlorobiphenyl							
Affected Samples:		-					
		· 1					

Instrument: <u>HP2404</u> Column: <u>RTX-35</u>

Date:	5/17/94	5/24	5/24				
Time:	17:19	00:41	09:01				
	initial Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.
	%ASD	%D	% D	% D	%0	%D	% D
2-Bromobiphenyl	ok	ok	ok				
3-Bromobiphenyl							
4-Bromobiphenyl							
Hexachiorobenzene							
gamma-BHC (Lindane)							
Aldrin							
Heptaclor epoxide							
gamma-Chiordane							
alpha-Chiordane							
trans-Nonachior							
4,4'-DDE							
Dieldrin							
4,4'-DDD							
cis-Nonachlor							
4,4'-DDT							
Hexabromobiphenyl (BP-6)							
Toxaphene							
Tetrachioro-m-xylene							
Decachlorobiphenyl							
affected Samples:							
							,

Corrected Sample Analysis Data Sheets

Lab Name: Aquatec, Inc.

Lab Code: AQUAI

Contract: 91082

Case: BIO

Client ID No. K40133F

42788

Biota 10.0 mg

Phase Weight: 10.0 mg
Extraction: Soxhlet
Dilution Factor: 1.0

Phase Type:

 Lab Sample ID:
 213362

 Date Received:
 03/08/94

 Date Extracted:
 03/25/94

 Date Analyzed:
 04/16/94

 Sulfur Clean-up:
 N

SDG:

			7
COMPOUND	CONCENTRATION (mg/Kg)	a	
2-Bromobiphenyl	0.010	U	1
3-Bromobiphenyl	0.010	U	
4-Bromobiphenyl	0.010	ט	1
Hexachlorobenzene	0.0050	U	1
gamma-BHC	0.0050	U	1
Aldrin	0.073	JN	1
Heptachlor Epoxide	0.069		1
gamma-Chlordane	0.026		R
alpha-Chiordane	0.0050	U	1
trans-Nonachlor	0.0050	U	1
4,4'-DDE	0.11		1
Dieldrin	0,010	U	1
4,4'-DDD	0.046		1
cis-Nonachlor	0.0050	U	1
4,4' DDT	0.022		IR
Hexabromobiphenyl	0.020	U	1 ` `
Toxaphene	0.20	U	1
	2-Bromobiphenyl 3-Bromobiphenyl 4-Bromobiphenyl Hexachlorobenzene gamma-BHC Aldrin Heptachlor Epoxide gamma Chlordane alpha-Chlordane trans-Nonachlor 4,4'-DDE Dieldrin 4,4'-DDD cis-Nonachlor 4,4'-DDT Hexabromobiphenyl	(mg/Kg)	Comp/Kg Comp/Kg

Lab Name: Aquatec, Inc.

Lab Code: AQUAI

Contract: 91082

Case: BIO

K40133R

Client ID No.

SDG: 42788

Phase Type: Biota
Phase Weight: 10.0 mg
Extraction: Soxhlet
Dilution Factor: 1.0

Lab Sample ID: 213363
Date Received: 03/08/94
Date Extracted: 03/25/94
Date Analyzed: 04/16/94
Sulfur Clean-up: N

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	Q
2052-07-5	2-Bromobiphenyl	0.030 -0.046-	エロリ
2113-57-7	3-Bromobiphenyl	0.010	Ú
92-66-0	4-Bromobiphenyl	0.010	U
118-74-1	Hexachlorobenzene	0.0050	U
58-89-9	gamma-BHC	0.0050	U
309-00-2	Aldrin	0.18 0.15	WIG +
1024-57-3	Heptachlor Epoxide	0.17 0.14	*
5103-74-2	gamma-Chlordane	0.057	
5103-71-9	alpha-Chlordane	0.0050	U
39765-80-5	trans-Nonachior	0.0050	U
72-55-9	4,4'-DDE	0.15 0.000	DΤ
60-57-1	Dieldrin	0.010	U
72-54-8	4,4'-DDD	0.110	
5103-73-1	cis-Nonachlor	0.0050	υ
50-29-3	4,4'-DDT	0.010	U
36355-01-8	Hexabromobiphenyl	0.020	U
8001-35-2	Toxaphene	0.20	U

Lab Name: Aquatec, Inc.
Lab Code: AQUAI
Contract: 91082
Case: BIO

Client ID No.
K40135F

SDG: __

42788

Phase Type: Biota

Phase Weight: 10.0 mg

Extraction: Soxhlet

Dilution Factor: 1.0

 Lab Sample ID:
 213365

 Date Received:
 03/08/94

 Date Extracted:
 03/25/94

 Date Analyzed:
 04/16/94

 Sulfur Clean-up:
 N

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	Q
2052-07-5	2-Bromobiphenyl	0.010	U
2113-57-7	3-Bromobiphenyl	0.010	U
92-66-0	4-Bromobiphenyl	0.010	Ü
118-74-1	Hexachlorobenzene	0.0050	U
58-89-9	gamma-BHC	0.0050	U
309-00-2	Aldrin	O. 11 0.11-	NTC -X
1024-57-3	Heptachlor Epoxide	0.084 0.008	* 22
5103 74 2	gamma Chlordane	0.045	
5103-71-9	alpha-Chlordane	0.0050	U
39765-80-5	trans-Nonachlor	0.0050	U
72-55-9	4,4'-DDE	0.19 0.23	* 77
60-57-1	Dieldrin	0.070	
72-54-8	4,4'-DDD	0.010	U
5103-73-1	cis-Nonachlor	0.0050	U
50-29-3	4,4'-DDT	0.041	NE
36355-01-8	Hexabromobiphenyl	0.020	U
8001-35-2	Toxaphene	0.20	U

R

Lab Name: Aquatec, Inc.
Lab Code: AQUAI
Contract: 91082
Case: BIO

Client ID No. K40135R

42788

Phase Type: Biota
Phase Weight: 10.0 mg
Extraction: Soxhlet
Dilution Factor: 1.0

Lab Sample ID: 213366
Date Received: 03/08/94
Date Extracted: 03/25/94
Date Analyzed: 04/16/94
Sulfur Clean-up: N

SDG:

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	a
2052-07-5	2-Bromobiphenyl	0,020 0.030	LEN
2113-57-7	3-Bromobiphenyl	0.010	U
92-66-0	4-Bromobiphenyl	0.010	U
118-74-1	Hexachiorobenzene	0.0050	U
58-89-9	gamma-BHC	0.0050	U
309-00-2	Aldrin	0.13 -0.004	NEC -X-
1024-57-3	Heptachlor Epoxide	0.11 0.084	X- D:7
5103-74-2	gamma-Chlordane	0.040	JN
5103-71-9	alpha-Chlordane	0.0050	U
39765-80-5	trans-Nonachlor	0.0050	U
72-55-9	4,4'-DDE	0.14 0.20-	* 27
60-57-1	Dieldrin	0.010	U
72-54-8	4,4'-DDD	0.060	
5103-73-1	cis-Nonachlor	0.0050	U
50-29-3	4,4'-DDT	0.010	U
36355-01-8	Hexabromobiphenyl	0.020	U
8001-35-2	Toxaphene	0.20	υ

Lab Name: Aquatec, Inc.
Lab Code: AQUAI
Contract: 91082
Case: BIO

K40136F

42788

Client ID No.

Phase Type: Biota

Phase Weight: 10.0 mg

Extraction: Soxhlet

Dilution Factor: 1.0

Lab Sample ID: 213368
Date Received: 03/08/94
Date Extracted: 03/25/94
Date Analyzed: 04/16/94
Sulfur Clean-up: N

SDG:

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	a	
2052-07-5	2-Bromobiphenyl	0,010 0.030	u	
2113-57-7	3-Bromobiphenyl	0.010	U	
92-66-0	4-Bromobiphenyl	0.010	U	
118-74-1	Hexachlorobenzene	0.0050	U	
58-89-9	gamma-BHC	0.0050	U	
309-00-2	Aldrin	0.049	72	
1024-57-3	Heptachlor Epoxide	0.051		
5103-74-2	gamma-Chlordane	0.016		R
5103-71-9	alpha-Chlordane	0.0050	U	
39765-80-5	trans-Nonachlor	0.0050	U	
72-55-9	4,4'-DDE	0.066		
60-57-1	Dieldrin	0.010	U	
72-54-8	4,4'-DDD	0.023		
5103-73-1	cis-Nonachlor	0.0050	U	
50-29-3	4,4'-DDT	0.010	U	
36355-01-8	Hexabromobiphenyl	0.020	U	
8001-35-2	Toxaphene	0.20	υ	

Lab Name: Aquatec, Inc.

Lab Code: AQUAI

Contract: 91082

Case: BIO

Client ID No. K40136R

SDG: 42788

Phase Type: Biota
Phase Weight: 10.0 mg
Extraction: Soxhlet
Dilution Factor: 1.0

 Lab Sample ID:
 213369

 Date Received:
 03/08/94

 Date Extracted:
 03/25/94

 Date Analyzed:
 04/16/94

 Sulfur Clean-up:
 N

			1
COMPOUND	CONCENTRATION (mg/Kg)	a	
2-Bromobiphenyl	0.12	77	
3-Bromobiphenyl	0.010	U	
4-Bromobiphenyl	0.010	U	
Hexachlorobenzene	0.0050	U	
gamma-BHC	0.0050	U	
Aldrin	0.25 -0.16-	NTC *	
Heptachlor Epoxide		-X- ⊅: -	
gemme Chierdone	0.059		R
alpha-Chlordane	0.0050	U	
trans-Nonachior	0.0050	U	
4,4'-DDE	0.28 0.27	* D2	
Dieldrin	0.010	U	
4,4'-DDD	0.11		
cis-Nonachlor	0.0050	U	
4,4'-DDT	0.10 -0.049	UDJ	
Hexabromobiphenyl	0.020	U	
Toxaphene	0.20	U	
	2-Bromobiphenyl 3-Bromobiphenyl 4-Bromobiphenyl Hexachlorobenzene gamma-BHC Aldrin Heptachlor Epoxide gamma-Chlordane alpha-Chlordane trans-Nonachlor 4,4'-DDE Dieldrin 4,4'-DDD cis-Nonachlor 4,4'-DDT Hexabromobiphenyl	2-Bromobiphenyl 0.12 3-Bromobiphenyl 0.010 4-Bromobiphenyl 0.010 Hexachlorobenzene 0.0050 gamma-BHC 0.0050 Aldrin 0.25 0.16 Heptachlor Epoxide 0.20 0.15 gamma Chlordane 0.0050 trans-Nonachlor 0.0050 4,4'-DDE 0.28 0.27 Dieldrin 0.010 4,4'-DDD 0.11 cis-Nonachlor 0.0050 4,4'-DDT 0.10 0.0050 4,4'-DDT 0.10 0.0050 Hexabromobiphenyl 0.020	2-Bromobiphenyl 0.12 JN 3-Bromobiphenyl 0.010 U 4-Bromobiphenyl 0.010 U Hexachlorobenzene 0.0050 U gamma-BHC 0.0050 U Aldrin 0.25 0.16 X DJN Heptachlor Epoxide 0.0050 U gamma Chlordane 0.059 alpha-Chlordane 0.0050 U trans-Nonachlor 0.0050 U 4,4'-DDE 0.28 0.27 X DJ Dieldrin 0.010 U 4,4'-DDD 0.11 cis-Nonachlor 0.0050 U 4,4'-DDT 0.0050 U 4,4'-DDT 0.0050 U 4,4'-DDT 0.0050 U 4,4'-DDT 0.0050 U

Lab Name: Aquatec, Inc.
Lab Code: AQUAI
Contract: 91082
Case: BIO

Client ID No.
K40137F

42788

Phase Type: Biota

Phase Weight: 10.0 g

Extraction: Soxhlet

Dilution Factor: 1.0

 Lab Sample ID:
 213371

 Date Received:
 03/08/94

 Date Extracted:
 03/25/94

 Date Analyzed:
 04/16/94

 Sulfur Clean-up:
 N

SDG:

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	Q	
2052-07-5	2-Bromobiphenyl	0.010	U	
2113-57-7	3-Bromobiphenyl	0.010	U	
92-66-0	4-Bromobiphenyl	0.010	U	
118-74-1	Hexachlorobenzene	0.0050	U	
58-89-9	gamma-BHC	0.0050	U	
309-00-2	Aldrin	0.040	70	
1024-57-3	Heptachlor Epoxide	0.036		_
5103 74 2	gamma Chlordane	0.014		- R
5103-71-9	alpha-Chlordane	0.0050	U	
39765-80-5	trans-Nonachior	0.0050	U	
72-55-9	4,4'-DDE	0.061		
60-57-1	Dieldrin	0.010	U	
72-54-8	4,4'-DDD	0.017		
5103-73-1	cis-Nonachlor	0.0050	U	
50-29-3	4,4'-DDT	0.010	U	
36355-01-8	Hexabromobiphenyl	0.020	U	
8001-35-2	Toxaphene	0.20	U	

Client ID No. Aquatec, Inc. Lab Name: K40137R Lab Code: AQUAI 91082 Contract: Case: BIO SDG: 42788 213372 Lab Sample ID: Phase Type: **Biota** Date Received: 03/08/94 Phase Weight: 10.0 Date Extracted: 03/25/94 Extraction: Soxhlet 04/16/94 Date Analyzed: Dilution Factor: 1.0 Sulfur Clean-up: N

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	α
2052-07-5	2-Bromobiphenyl	0,010 0.052	リコロ
2113-57-7	3-Bromobiphenyl	0.010	U
92-66-0	4-Bromobiphenyl	0.010	υ
118-74-1	Hexachlorobenzene	0.0050	U
58-89-9	gamma-BHC	0.0050	U
309-00-2	Aldrin	0.090 0.000	メリリス
1024-57-3	Heptachlor Epoxide	0,083-0.000-	* DJ
5103-74-2	gamma-Chlordane	0.035	
5103-71-9	alpha-Chlordane	0.0050	U
39765-80-5	trans-Nonachlor	0.0050	U
72-55-9	4,4'-DDE	0.14 0.16	* 02
60-57-1	Dieldrin	0.010	U
72-54-8	4,4'-DDD	0.055	
5103-73-1	cis-Nonachlor	0.0050	U
50-29-3	4,4'-DDT	0.010	U
36355-01-8	Hexabromobiphenyl	0.020	U
8001-35-2	Toxaphene	0.20	U

Client ID No. Lab Name: Aquatec, Inc. K40138F Lab Code: AQUAI Contract: 91082 BIO Case: _ SDG: __ 42788 Lab Sample ID: 213374 Phase Type: **Biota Date Received:** 03/08/94 Phase Weight: 10.0 Date Extracted: 03/25/94 Extraction: Soxhlet Date Analyzed: 04/16/94 Dilution Factor: 1.0 Sulfur Clean-up: N

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	Q
2052-07-5	2-Bromobiphenyl	0.010	υ
2113-57-7	3-Bromobiphenyl	0.010	υ
92-66-0	4-Bromobiphenyl	0.010	U
118-74-1	Hexachlorobenzene	0.0050	Ų
58-89-9	gamma-BHC	0.0050	U
309-00-2	Aldrin	0.052	JN
1024-57-3	Heptachlor Epoxide	0.0050	U
5103-74-2	gamma-Chlordane	0.021	NE
5103-71-9	alpha-Chlordane	0.0061	7
39765-80-5	trans-Nonachlor	0.0050	U
72-55-9	4,4'-DDE	0.093	
60-57-1	Dieldrin	0.010	U
72-54-8	4,4'-DDD	0.024	
5103-73-1	cis-Nonachlor	0.0050	U
50-29-3	4,4'-DDT	0.010	U
36355-01-8	Hexabromobiphenyl	0.020	U
8001-35-2	Toxaphene	0.20	U

Lab Name: Aquatec, Inc.
Lab Code: AQUAI
Contract: 91082
Case: BIO

Client ID No. K40138R

42788

Phase Type: Biota

Phase Weight: 10.0 g

Extraction: Soxhlet

Dilution Factor: 1.0

 Lab Sample ID:
 213375

 Date Received:
 03/08/94

 Date Extracted:
 03/25/94

 Date Analyzed:
 04/16/94

 Sulfur Clean-up:
 N

SDG:

	The state of the s				
-	CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	Q	
_	2052-07-5	2-Bromobiphenyl	0.10	JN	
	2113-57-7	3-Bromobiphenyl	0.010	U	
	92-66-0	4-Bromobiphenyl	0.010	U	
	118-74-1	Hexachlorobenzene	0.0050	U	
	58-89-9	gamma-BHC	0.0050	Ü	
	309-00-2	Aldrin	0.15 0.12	WCC -*	
	1024-57-3	Heptachlor Epoxide	0.13 0.11	* DJ	
_	5103-74-2	gemme Chlordane	0.052		R
	5103-71-9	alpha-Chlordane	0.019		
	39765-80-5	trans-Nonachlor	0.0050	Ū	
	72-55-9	4,4'-DDE	a29 0.25	TQ— ×	
	60-57-1	Dieldrin	0.010	Ü	
	72-54-8	4,4'-DDD	0.083		
	5103-73-1	cis-Nonachlor	0.0050	U	
7	50-29-3	4;4'-DDT	0.048		-R
	36355-01-8	Hexabromobiphenyl	0.020	U	
	8001-35-2	Toxaphene	0.20	U	

Client ID No. Lab Name: K40140F Aquatec, Inc. Lab Code: AQUAI Contract: 91082 BIO Case: SDG: 42788 Lab Sample ID: 213377 Phase Type: **Biota** Date Received: 03/08/94 Phase Weight: 10.0 Date Extracted: 03/25/94 Extraction: Date Analyzed: Soxhlet 04/16/94 Dilution Factor: 1.0 Sulfur Clean-up: Ν

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	a
2052-07-5	2-Bromobiphenyl	0.10	U
2113-57-7	3-Bromobiphenyl	0.010	U
92-66-0	4-Bromobiphenyl	0.010	U
118-74-1	Hexachlorobenzene	0.0050	U
58-89-9	gamma-BHC	0.0050	U
309-00-2	Aldrin	0.026	NE
1024-57-3	Heptachlor Epoxide	0.020	
5103-74-2	gamma-Chlordane	0.0094	JN
5103-71-9	alpha-Chiordane	0.0050	U
39765-80-5	trans-Nonachlor	0.0050	υ
72-55-9	4,4'-DDE	0.036	
60-57-1	Dieldrin	0.010	U
72-54-8	4,4'-DDD	0.010	U
5103-73-1	cis-Nonachlor	0.0050	U
50-29-3	4,4'-DDT	0.010	U
36355-01-8	Hexabromobiphenyl	0.020	U
8001-35-2	Toxaphene	0.20	U

Biota
10.0 g
Soxhlet
1.0

Lab Sample ID:	213378
Date Received:	03/08/94
Date Extracted:	03/25/94
Date Analyzed:	04/16/94
Sulfur Clean-up:	N
· · · · · · · · · · · · · · · · · · ·	

COMPOUND	CONCENTRATION (mg/Kg)	Q
2-Bromobiphenyl	0.050	JN
3-Bromobiphenyl	0.010	U
4-Bromobiphenyl	0.010	U
Hexachlorobenzene	0.0050	U
gamma-BHC	0.0050	U
Aldrin	0.12 -0.080-	X DIN
Heptachlor Epoxide	0.072	7
gemma Chlordane	0.034	
aipha-Chiordane	0.012	'
trans-Nonachlor	0.0050	U
4,4'-DDE	0.15	
Dieldrin	0.010	U
4,4'-DDD	0.049	
cis-Nonachlor	0.0050	U
4,4'-DDT	0.032	}
Hexabromobiphenyl	0.020	U
Toxaphene	0.20	U
	2-Bromobiphenyl 3-Bromobiphenyl 4-Bromobiphenyl Hexachlorobenzene gamma-BHC Aldrin Heptachlor Epoxide gamma Chlordane alpha-Chlordane trans-Nonachlor 4,4'-DDE Dieldrin 4,4'-DDD cis-Nonachlor 4,4'-DDT Hexabromobiphenyl	Comp/Kg

 Lab Name:
 Aquatec, Inc.
 K40350F

 Lab Code:
 AQUAI

 Contract:
 91082

 Case:
 BIO

 SDG:
 42788

 Phase Type:
 Biota

 Date Received:
 03/08/94

Phase Type: Biota

Phase Weight: 10.0 g

Extraction: Soxhlet

Dilution Factor: 1.0

/94
/94
/94

Client ID No.

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	Q
2052-07-5	2-Bromobiphenyl	0.010	U
2113-57-7	3-Bromobiphenyl	0.010	U
92-66-0	4-Bromobiphenyl	0.010	U
118-74-1	Hexachlorobenzene	0.0050	U
58-89-9	gamma-BHC	0.0050	U
309-00-2	Aldrin	0.031	J
1024-57-3	Heptachlor Epoxide	0.019	T
5103-74-2	gamma-Chlordane	0.010	JN
5103-71-9	alpha-Chiordane	0.0050	U
39765-80-5	trans-Nonachlor	0.0050	U
72-55-9	4,4'-DDE	0.024	77
60-57-1	Dieldrin	0.015	
72-54-8	4,4'-DDD	0.010	
5103-73-1	cis-Nonachlor	0.0050	U
50-29-3	4,4'-DDT	0.010	U
36355-01-8	Hexabromobiphenyl	0.020	U
8001-35-2	Toxaphene	0.20	U

Lab Name: Aquatec, Inc.

Lab Code: AQUAI

Contract: 91082

Case: BIO

K40350R

R

Client ID No.

SDG: 42788

Phase Type: Biota
Phase Weight: 10.0 g
Extraction: Soxhlet
Dilution Factor: 1.0

Lab Sample ID: 213381

Date Received: 03/08/94

Date Extracted: 03/25/94

Date Analyzed: 04/16/94

Sulfur Clean-up: N

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	a
2052-07-5	2-Bromobiphenyl	0.010	U
2113-57-7	3-Bromobiphenyl	0.010	U
92-66-0	4-Bromobiphenyl	0.010	U
118-74-1	Hexachlorobenzene	0.0050	υ
58-89-9	gamma-BHC	0.0050	U
309-00-2	Aldrin	0.16 0.12	* DI
1024-57-3	Heptachlor Epoxide	0.056	7
5103-74-2	gamma-Chlordane	0.045	JN
5103-71-9	alpha-Chlordane	0.0050	U
39765-80-5	trans-Nonachlor	0.0050	U
72-55-9	4,4'-DDE	0.12	4
60-57-1	Dieldrin	0.010	U
72-54-8	4,4'-DDD	0.053	
5103-73-1	cis-Nonachlor	0.0050	U
50 20 3	4,4'-DDT	0.032	
36355-01-8	Hexabromobiphenyl	0.020	U
8001-35-2	Toxaphene	0.20	U

Lab Name: Aquatec, Inc.

Lab Code: AQUAI

Contract: 91082

Case: BIO

Client ID No. K40351F

SDG: 42788

Phase Type: Biota

Phase Weight: 10.0 g

Extraction: Soxhlet

Dilution Factor: 1.0

 Lab Sample ID:
 213383

 Date Received:
 03/08/94

 Date Extracted:
 03/25/94

 Date Analyzed:
 04/16/94

 Sulfur Clean-up:
 N

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	Q	
2052-07-5	2-Bromobiphenyl	0.010	U	-
2113-57-7	3-Bromobiphenyl	0.010	U	
92-66-0	4-Bromobiphenyl	0.010	U	
118-74-1	Hexachlorobenzene	0.0050	U	7
58-89-9	gamma-BHC	0.0050	U	7
309-00-2	Aldrin	0.017		ÐΚ
1024-57-3	Heptachlor Epoxide	0.022		7'`
5103-74-2	gamma-Chlordane	0.0050	Ū	7
5103-71-9	alpha-Chlordane	0.0050	U	7
39765-80-5	trans-Nonachlor	0.0050	U	\neg
72-55-9	4,4'-DDE	0.010	U	7
60-57-1	Dieldrin	0.010	U	
72-54-8	4,4'-DDD	0.010	U	7
5103-73-1	cis-Nonachlor	0.0050	U	7
50 20 3	4,4' DDT	0.012		7R
36355-01-8	Hexabromobiphenyl	0.020	U	٦΄)
8001-35-2	Toxaphene	0.20	U	

Lab Name: Aquatec, Inc.
Lab Code: AQUAI
Contract: 91082
Case: BIO

K40351R

Client ID No.

SDG: 42788

Phase Type: Biota
Phase Weight: 10.0 g
Extraction: Soxhlet
Dilution Factor: 1.0

 Lab Sample ID:
 213384

 Date Received:
 03/08/94

 Date Extracted:
 03/25/94

 Date Analyzed:
 04/16/94

 Sulfur Clean-up:
 N

CAS NO.	COMPOUND	CONCENTRATION	a	
		(mg/Kg)		
2052-07-5	2-Bromobiphenyl	0.049		
2113-57-7	3-Bromobiphenyl	0.010	U	
92-66-0	4-Bromobiphenyl	0.010	U	
118-74-1	Hexachlorobenzene	0.0050	U	
58-89-9	gamma-BHC	0.0050	U	
309 00 2	Aldrin	0.060		R
1024-57-3	Heptachlor Epoxide	O.11 0.080	*- DI	
5103-74-2	gamma Chlordane	0.030		R
5103-71-9	alpha-Chlordane	0.0050	U	•
39765-80-5	trans-Nonachlor	0.0050	U	
72-55-9	4,4'-DDE	0.087	7	
60-57-1	Dieldrin	0.010	U	
72-54-8	4,4'-DDD	0.011		
5103-73-1	cis-Nonachlor	0.0050	U	
50 20 3	4,4' DDT	0.050		R
36355-01-8	Hexabromobiphenyl	0.020	U	•
8001-35-2	Toxaphene	0.20	U	

Lab Name: Aquatec, Inc.

Lab Code: AQUAI

Contract: 91082

Case: BIO

Client ID No.
K40352F

SDG: 42788

Phase Type: Biota
Phase Weight: 10.0 g
Extraction: Soxhlet
Dilution Factor: 1.0

Lab Sample ID: 213386

Date Received: 03/08/94

Date Extracted: 03/25/94

Date Analyzed: 04/28/94

Sulfur Clean-up: N

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	Q
2052-07-5	2-Bromobiphenyl	0.010	υ
2113-57-7	3-Bromobiphenyl	0.010	U
92-66-0	4-Bromobiphenyl	0.010	U
118-74-1	Hexachlorobenzene	0.0050	U
58-89-9	gamma-BHC	0.0050	U
309-00-2	Aldrin	0.021	5
1024-57-3	Heptachlor Epoxide	0.0050	U
5103-74-2	gamma-Chlordane	0.0050	Ü
5103-71-9	alpha-Chiordane	0.0050	U
39765-80-5	trans-Nonachior	0.0050	Ū
72-55-9	4,4'-DDE	0.029	b
60-57-1	Dieldrin	0.010	U
72-54-8	4,4'-DDD	0.010	U
5103-73-1	cis-Nonachlor	0.0050	U
50-29-3	4,4'-DDT	0.010	U
36355-01-8	Hexabromobiphenyl	0.020	U
8001-35-2	Toxaphene	0.20	U

Lab Name: Aquatec, Inc.

Lab Code: AQUAI

Contract: 91082

Case: BIO

Client ID No. K40352R

SDG: ____42788

Phase Type: Biota
Phase Weight: 10.0 g
Extraction: Soxhlet
Dilution Factor: 1.0

 Lab Sample ID:
 213387

 Date Received:
 03/08/94

 Date Extracted:
 03/25/94

 Date Analyzed:
 04/28/94

 Sulfur Clean-up:
 N

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	a
2052-07-5	2-Bromobiphenyl	0.010	U
2113-57-7	3-Bromobiphenyl	0.010	U
92-66-0	4-Bromobiphenyl	0.010	U
118-74-1	Hexachlorobenzene	0.0050	U
58-89-9	gamma-BHC	0.0050	U .
309-00-2	Aldrin	0.072	NC.
1024-57-3	Heptachlor Epoxide	0.070	
5103-74-2	gamma-Chlordane	0.0050	U
5103-71-9	alpha-Chlordane	0.0050	U
39765-80-5	trans-Nonachlor	0.0050	U
72-55-9	4,4'-DDE	0.14	
60-57-1	Dieldrin	0.010	U
72-54-8	4,4'-DDD	0.025	
5103-73-1	cis-Nonachlor	0.0050	U
50-29-3	4,4'-DDT	0.010	U
36355-01-8	Hexabromobiphenyl	0.020	U
8001-35-2	Toxaphene	0.20	U

Lab Name: Aquatec, Inc.

Lab Code: AQUAI

Contract: 91082

Case: BIO

Client ID No. K40353F

SDG: 42788

Phase Type: Biota
Phase Weight: 10.0 g
Extraction: Soxhlet
Dilution Factor: 1.0

 Lab Sample ID:
 213389

 Date Received:
 03/08/94

 Date Extracted:
 03/25/94

 Date Analyzed:
 04/17/94

 Sulfur Clean-up:
 N

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	Q	
2052-07-5	2-Bromobiphenyl	0.010	υ	
2113-57-7	3-Bromobiphenyl	0.010	U	1
92-66-0	4-Bromobiphenyl	0.010	U	
118-74-1	Hexachlorobenzene	0.0050	U	
58-89-9	gamma-BHC	0.0050	U	
309-00-2	Aldrin	0.042	NC	
1024-57-3	Heptachlor Epoxide	0.047		
5103 74 2	gemme Chlordane	0.017		R
5103-71-9	alpha-Chlordane	0.0085		' `
39765-80-5	trans-Nonachlor	0.0050	U	
72-55-9	4,4'-DDE	0.055	7	
60-57-1	Dieldrin	0.010	U	
72-54-8	4,4'-DDD	0.010	U	
5103-73-1	cis-Nonachlor	0.0050	Ū	
50 29 3	4,4' DDT	0.024		R
36355-01-8	Hexabromobiphenyl	0.020	U	
8001-35-2	Toxaphene	0.20	U	

Lab Name: Aquatec, Inc.
Lab Code: AQUAI
Contract: 91082
Case: BIO

K40353R

Client ID No.

SDG: 42788

Phase Type: Biota
Phase Weight: 10.0 g
Extraction: Soxhlet
Dilution Factor: 1.0

Lab Sample ID: 213390
Date Received: 03/08/94
Date Extracted: 03/25/94
Date Analyzed: 04/17/94
Sulfur Clean-up: N

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	a
2052-07-5	2-Bromobiphenyl	0.010	U
2113-57-7	3-Bromobiphenyl	0.010	U
92-66-0	4-Bromobiphenyl	0.010	U
118-74-1	Hexachlorobenzene	0.0050	U
58-89-9	gamma-BHC	0.0050	U
309-00-2	Aldrin	0.074	7/
1024-57-3	Heptachlor Epoxide	0.097-0.084	★
5103-74-2	gamma-Chlordane	0.0050	J
5103-71-9	alpha-Chlordane	0.015	
39765-80-5	trans-Nonachlor	0.0050	U
72-55-9	4,4'-DDE	0.11	7
60-57-1	Dieldrin	0.010	U
72-54-8	4,4'-DDD	0.019	7
5103-73-1	cis-Nonachlor	0.0050	U
50-29-3	4,4' DDT	0.044	
36355-01-8	Hexabromobiphenyl	0.020	U
8001-35-2	Toxaphene	0.20	υ

Lab Name: Aquatec, Inc.
Lab Code: AQUAI
Contract: 91082
Case: BIO

Client ID No.
K40354F

42788

Phase Type: Biota

Phase Weight: 10.0 g

Extraction: Soxhlet

Dilution Factor: 1.0

 Lab Sample ID:
 213392

 Date Received:
 03/08/94

 Date Extracted:
 03/25/94

 Date Analyzed:
 04/17/94

 Sulfur Clean-up:
 N

	CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	Q	
┟	2052-07-5	2-Bromobiphenyl	0.010	U	
Τ	2113-57-7	3-Bromobiphenyl	0.010	U	
Γ	92-66-0	4-Bromobiphenyl	0.010	U	
Γ	118-74-1	Hexachlorobenzene	0.0050	U	
Γ	58-89-9	gamma-BHC	0.0050	U	
Γ	309-00-2	Aldrin	0.023	JN	
	1024-57-3	Heptachlor Epoxide	0.024		
+	5103 74 2	gamma Chlordane	0.0078		-R
Γ	5103-71-9	alpha-Chlordane	0.0050	U	, ,
	39765-80-5	trans-Nonachior	0.0050	U	
	72-55-9	4,4'-DDE	0.029	5	
	60-57-1	Dieldrin	0.010	U	
Г	72-54-8	4,4'-DDD	0.010	U	
	5103-73-1	cis-Nonachlor	0.0050	υ	
F	50 29 3	4,4' DDT	0.014		R
Г	36355-01-8	Hexabromobiphenyl	0.020	U	• •
	8001-35-2	Toxaphene	0.20	U	

Lab Name: Aquatec, Inc.
Lab Code: AQUAI
Contract: 91082
Case: BIO

Client ID No.
K40354R

SDG: 42788

Phase Type: Biota

Phase Weight: 10.0 g

Extraction: Soxhlet

Dilution Factor: 1.0

Lab Sample ID: 213393

Date Received: 03/08/94

Date Extracted: 03/25/94

Date Analyzed: 04/17/94

Sulfur Clean-up: N

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	Q	
2052-07-5	2-Bromobiphenyl	0.010	U	
2113-57-7	3-Bromobiphenyl	0.010	U	
92-66-0	4-Bromobiphenyl	0.010	U	
118-74-1	Hexachlorobenzene	0.0050	U	
58-89-9	gamma-BHC	0.0050	Ū	
309-00-2	Aldrin	0.059	7	
1024-57-3	Heptachlor Epoxide	0.0050	U	
- 5103-74-2	gamma-Chlordane	0.023		R
5103-71-9	alpha-Chlordane	0.0050	U	
39765-80-5	trans-Nonachlor	0.0050	U	
72-55-9	4,4'-DDE	0.097		
60-57-1	Dieldrin	0.010	U	
72-54-8	4,4'-DDD	0.015	7	
5103-73-1	cis-Nonachlor	0.0050	U	
50-29-3	4,4'-DDT	0.010	U	
36355-01-8	Hexabromobiphenyl	0.020	U	
8001-35-2	Toxaphene	0.20	U	

Aquatec, Inc. K40359F Lab Name: Lab Code: AQUAI 91082 Contract: BIO 42788 SDG: Case: 213395 Lab Sample ID: /08/94

Client ID No.

Phase Type:	Biota	Date Received:	03/08/94
Phase Weight:	10.0 g	Date Extracted:	03/25/94
Extraction:	Soxhlet	Date Analyzed:	04/17/94
Dilution Factor:	1.0	Sulfur Clean-up:	N
		-	

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	a	
2052-07-5	2-Bromobiphenyl	0.010	U	
2113-57-7	3-Bromobiphenyl	0.010	U	
92-66-0	4-Bromobiphenyl	0.010	U	
118-74-1	Hexachlorobenzene	0.0050	U	
58-89-9	gamma-BHC	0.0050	U	
309-00-2	Aldrin	0.13 0.094	* DJ	
1024-57-3	Heptachlor Epoxide	0.051	7	
5103 74 2	gamma-Chlordano	0.025		R
5103-71-9	alpha-Chlordane	0.0050	U	
39765-80-5	trans-Nonachlor	0.0050	U	
72-55-9	4,4'-DDE	0.010	U	
60-57-1	Dieldrin	0.010	U	
72-54-8	4,4'-DDD	0.022		
5103-73-1	cis-Nonachlor	0.0050	U	
50-29-3	4,4'-DDT	0.017		R
36355-01-8	Hexabromobiphenyl	0.020	U	
8001-35-2	Toxaphene	0.20	U	

Soxhlet

1.0

Extraction:

Dilution Factor:

Client ID No. K40359R Lab Name: Aquatec, Inc. Lab Code: AQUAI 91082 Contract: Case: BIO SDG: 42788 Lab Sample ID: 213396 Phase Type: **Biota Date Received:** 03/08/94 Phase Weight: Date Extracted: 10.0 03/25/94

Date Analyzed:

Sulfur Clean-up:

04/17/94

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Lab Name: Aquatec, Inc.

Lab Code: AQUAI

Contract: 91082

Case: BIO SDG:

Phase Type: Biota
Phase Weight: 10.0 g
Extraction: Soxhlet
Dilution Factor: 1.0

Lab Sample ID: 213398
Date Received: 03/08/94
Date Extracted: 03/25/94
Date Analyzed: 04/17/94
Sulfur Clean-up: N

Client ID No.

K40361F

42788

CAS NO.	COMPOUND	CONCENTRATION	Q
1	i	(mg/Kg)	
2052-07-5	2-Bromobiphenyl	0.010	U
2113-57-7	3-Bromobiphenyl	0.010	U
92-66-0	4-Bromobiphenyl	0.010	U
118-74-1	Hexachlorobenzene	0.0050	U
58-89-9	gamma-BHC	0.0050	U
309-00-2	Aldrin	0.42 0.21	× DT
1024-57-3	Heptachlor Epoxide	0.22 0.13	* D.J
5103-74-2	gamma-Chlordane	0.066	
5103-71-9	alpha-Chlordane	0.0050	U
39765-80-5	trans-Nonachlor	0.0050	U
72-55-9	4,4'-DDE	0.13	7
60-57-1	Dieldrin	0.010	U
72-54-8	4,4'-DDD	0.049	
5103-73-1	cis-Nonachlor	0.0050	U
50-29-3	4,4'-DDT	0,10 -0.042	UDJ
36355-01-8	Hexabromobiphenyl	0.020	U
8001-35-2	Toxaphene	0.20	U

Lab Name: Aquatec, Inc.

Lab Code: AQUAI

Contract: 91082

Case: BIO

Client ID No.
K40361R

SDG: 42788

Phase Type: Biota

Phase Weight: 10.0 g

Extraction: Soxhlet

Dilution Factor: 1.0

Lab Sample ID: 213399
Date Received: 03/08/94
Date Extracted: 03/25/94
Date Analyzed: 04/17/94
Sulfur Clean-up: N

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	Q	
2052-07-5	2-Bromobiphenyl	0.010	U	
2113-57-7	3-Bromobiphenyl	0.010	U	[
92-66-0	4-Bromobiphenyl	0.010	U]
118-74-1	Hexachlorobenzene	0.0050	U	1
58-89-9	gamma-BHC	0.0050	U	1
309-00-2	Aldrin	0.29 -0.18-	* DJ	1
1024-57-3	Heptachlor Epoxide	0.16 -0.12	* DJ	}
5103 74 2	gamma-Chlordane-	0.061		R
5103-71-9	alpha-Chlordane	0.0050	U	 `
39765-80-5	trans-Nonachlor	0.0050	U	
72-55-9	4,4'-DDE	0.12	4	
60-57-1	Dieldrin	0.010	U	l
72-54-8	4,4'-DDD	0.046		1
5103-73-1	cis-Nonachlor	0.0050	U	1.
 50 29 3	4,4' DDT	0.040		R
36355-01-8	Hexabromobiphenyl	0.020	U	
8001-35-2	Toxaphene	0.20	U	

Lab Name: Aquatec, Inc.

Lab Code: AQUAI

Contract: 91082

Case: BIO

Client ID No. K40362F

SDG: 42788

Phase Type: Biota

Phase Weight: 10.0 g

Extraction: Soxhlet

Dilution Factor: 1.0

 Lab Sample ID:
 213401

 Date Received:
 03/08/94

 Date Extracted:
 03/25/94

 Date Analyzed:
 04/17/94

 Sulfur Clean-up:
 N

COMPOUND	CONCENTRATION (mg/Kg)	Q
2-Bromobiphenyl	0.010	U
3-Bromobiphenyl	0.010	U
4-Bromobiphenyl	0.010	U
Hexachlorobenzene	0.0050	U
gamma-BHC	0.0050	U
Aldrin	0.14 -0.11	x 27
Heptachlor Epoxide	0.061	7
gamma-Chlordane	0.039	JN
alpha-Chlordane	0.0050	U
trans-Nonachlor	0.0050	U
4,4'-DDE	0.10	4
Dieldrin	0.010	U
4,4'-DDD	0.035	
cis-Nonachlor	0.0050	U
4,4' DDT	0.026	
Hexabromobiphenyl	0.020	U
Toxaphene	0.20	U
	2-Bromobiphenyl 3-Bromobiphenyl 4-Bromobiphenyl Hexachlorobenzene gamma-BHC Aldrin Heptachlor Epoxide gamma-Chlordane alpha-Chlordane trans-Nonachlor 4,4'-DDE Dieldrin 4,4'-DDD cis-Nonachlor 4,4' DDT Hexabromobiphenyl	2-Bromobiphenyl 0.010 3-Bromobiphenyl 0.010 4-Bromobiphenyl 0.010 Hexachlorobenzene 0.0050 gamma-BHC 0.0050 Aldrin 0.14 0.11 Heptachlor Epoxide 0.061 gamma-Chlordane 0.039 alpha-Chlordane 0.0050 trans-Nonachlor 0.0050 4,4'-DDE 0.10 Dieldrin 0.010 4,4'-DDD 0.035 cis-Nonachlor 0.0050

Lab Name: Aquatec, Inc.

Lab Code: AQUAI

Contract: 91082

Case: BIO

Client ID No. K40362R

42788

Phase Type: Biota

Phase Weight: 10.0 g

Extraction: Soxhlet

1.0

Dilution Factor:

 Lab Sample ID:
 213402

 Date Received:
 03/08/94

 Date Extracted:
 03/25/94

 Date Analyzed:
 04/17/94

SDG:

Sulfur Clean-up:

04/17/94 N

-R

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	Q
2052-07-5	2-Bromobiphenyl	0.10	7
2113-57-7	3-Bromobiphenyl	0.010	U
92-66-0	4-Bromobiphenyl	0.010	U
118-74-1	Hexachlorobenzene	0.0050	U
58-89-9	gamma-BHC	0.0050	C
309-00-2	Aldrin	0.14 0.13	<u> </u>
1024-57-3	Heptachlor Epoxide	0.0050	U
5103-74-2	gamma-Chlordane	0.055	7
5103-71-9	alpha-Chlordane	0.0050	U
39765-80-5	trans-Nonachlor	0.0050	U
72-55-9	4,4'-DDE	0.14	
60-57-1	Dieldrin	0.010	U
72-54-8	4,4'-DDD	0.035 -0.035	22
5103-73-1	cis-Nonachlor	0.0050	U
50-29-3	4,4'-DDT-	0.025	
36355-01-8	Hexabromobiphenyl	0.020	U
8001-35-2	Toxaphene	0.20	U

 Lab Name:
 Aquatec, Inc.
 K40363F

 Lab Code:
 AQUAI

 Contract:
 91082

 Case:
 BIO

 SDG:
 42788

 Phase Type:
 Biota

 Lab Sample ID:
 213404

 Date Received:
 03/08/94

Client ID No.

Phase Type:	Biota	Date Received:	03/08/94
Phase Weight:	10.0 g	Date Extracted:	03/25/94
Extraction:	Soxhlet	Date Analyzed:	04/17/94
Dilution Factor:	1.0	Sulfur Clean-up:	N
		-	

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	α
2052-07-5	2-Bromobiphenyl	0.010	υ
2113-57-7	3-Bromobiphenyl	0.010	U
92-66-0	4-Bromobiphenyl	0.010	U
118-74-1	Hexachlorobenzene	0.0050	U
58-89-9	gamma-BHC	0.0050	U
309-00-2	Aldrin	0.049	7
1024-57-3	Heptachlor Epoxide	0.0050	U
5103-74-2	gamma-Chlordane	0.016	
5103-71-9	alpha-Chlordane	0.0050	U
39765-80-5	trans-Nonachlor	0.0050	U
72-55-9	4,4'-DDE	0.010	U
60-57-1	Dieldrin	0.010	U
72-54-8	4,4'-DDD	0.012	7
5103-73-1	cis-Nonachlor	0.0050	U
50-29-3	4,4'-DDT	0.011	
36355-01-8	Hexabromobiphenyl	0.020	U
8001-35-2	Toxaphene	0.20	U

Lab Name: Aquatec, Inc.

Lab Code: AQUAI

Contract: 91082

Case: BIO SDG:

 Lab Sample ID:
 213405

 Date Received:
 03/08/94

 Date Extracted:
 03/25/94

 Date Analyzed:
 04/17/94

 Sulfur Clean-up:
 N

Client ID No.

K40363R

42788

R

Phase Type:	Biota	
Phase Weight:	10.0 g	
Extraction:	Soxhlet	
Dilution Factor:	1.0	
		_

	T	 	
CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	α
2052-07-5	2-Bromobiphenyl	0.13	JN
2113-57-7	3-Bromobiphenyl	0.010	U
92-66-0	4-Bromobiphenyl	0.010	U
118-74-1	Hexachlorobenzene	0.0050	U
58-89-9	gamma-BHC	0.0050	U
309-00-2	Aldrin	0.12 -0.000-	* DJ
1024-57-3	Heptachlor Epoxide	0.044	7
5103-74-2	gamma-Chlordane	0.030	JN
5103-71-9	alpha-Chlordane	0.0050	U
39765-80-5	trans-Nonachlor	0.0050	U
72-55-9	4,4'-DDE	0.070	7
60-57-1	Dieldrin	0.010	U
72-54-8	4,4'-DDD	0.030	
5103-73-1	cis-Nonachlor	0.0050	U
50 29 3	4,4' DDT	0.023	
36355-01-8	Hexabromobiphenyl	0.020	U
8001-35-2	Toxaphene	0.20	U

Lab Name: Aquatec, Inc.
Lab Code: AQUAI
Contract: 91082
Case: BIO

Client ID No.
K40364F

SDG: 42788

Phase Type: Biota

Phase Weight: 10.0 g

Extraction: Soxhlet

Dilution Factor: 1.0

Lab Sample ID: 213407
Date Received: 03/08/94
Date Extracted: 03/25/94
Date Analyzed: 04/17/94
Sulfur Clean-up: N

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	a
2052-07-5	2-Bromobiphenyl	0.010	U
2113-57-7	3-Bromobiphenyl	0.010	U
92-66-0	4-Bromobiphenyl	0.010	U
118-74-1	Hexachlorobenzene	0.0050	U
58-89-9	gamma-BHC	0.0050	U
309-00-2	Aldrin	0.062	5
1024-57-3	Heptachlor Epoxide	0.034	5
5103-74-2	gamma-Chlordane	0.020	JN
5103-71-9	alpha-Chlordane	0.0050	U
39765-80-5	trans-Nonachior	0.0050	U
72-55-9	4,4'-DDE	0.045	Ţ
60-57-1	Dieldrin	0.010	U
72-54-8	4,4'-DDD	0.018	
5103-73-1	cis-Nonachlor	0.0050	U
50 29 3	4,4' DDT	0.013	
36355-01-8	Hexabromobiphenyi	0.020	U
8001-35-2	Toxaphene	0.20	Ū
	2052-07-5 2113-57-7 92-66-0 118-74-1 58-89-9 309-00-2 1024-57-3 5103-74-2 5103-71-9 39765-80-5 72-55-9 60-57-1 72-54-8 5103-73-1 50-29-3 36355-01-8	2052-07-5 2-Bromobiphenyl 2113-57-7 3-Bromobiphenyl 92-66-0 4-Bromobiphenyl 118-74-1 Hexachlorobenzene 58-89-9 gamma-BHC 309-00-2 Aldrin 1024-57-3 Heptachlor Epoxide 5103-74-2 gamma-Chlordane 5103-71-9 alpha-Chlordane 39765-80-5 trans-Nonachlor 72-55-9 4,4'-DDE 60-57-1 Dieldrin 72-54-8 4,4'-DDD 5103-73-1 cis-Nonachlor 4,4'-DDT 36355-01-8 Hexabromobiphenyl	2052-07-5 2-Bromobiphenyl 0.010 2113-57-7 3-Bromobiphenyl 0.010 92-66-0 4-Bromobiphenyl 0.010 118-74-1 Hexachlorobenzene 0.0050 58-89-9 gamma-BHC 0.0050 309-00-2 Aldrin 0.062 1024-57-3 Heptachlor Epoxide 0.034 5103-74-2 gamma-Chlordane 0.020 5103-71-9 alpha-Chlordane 0.0050 39765-80-5 trans-Nonachlor 0.0050 72-55-9 4,4'-DDE 0.045 60-57-1 Dieldrin 0.010 72-54-8 4,4'-DDD 0.018 5103-73-1 cis-Nonachlor 0.0050 50-29-3 4,4'-DDT 0.0050 50-29-3 50-29-3 4,4'-DDT 0.0050 50-29-3 5

Lab Name: Aquatec, Inc.

Lab Code: AQUAI

Contract: 91082

Case: BIO

Client ID No. K40364R

42788

Phase Type: Biota

Phase Weight: 10.0 g

Extraction: Soxhlet

Dilution Factor: 1.0

 Lab Sample ID:
 213408

 Date Received:
 03/08/94

 Date Extracted:
 03/25/94

 Date Analyzed:
 04/17/94

 Sulfur Clean-up:
 N

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	Q
2052-07-5	2-Bromobiphenyl	0.010	U
2113-57-7	3-Bromobiphenyl	0.010	U
92-66-0	4-Bromobiphenyl	0.010	U
118-74-1	Hexachlorobenzene	0.0050	U
58-89-9	gamma-BHC	0.0050	U
309-00-2	Aldrin	0.12 0.086	→ ⊅⊐
1024-57-3	Heptachlor Epoxide	0.052	エ
5103-74-2	gamma-Chlordane	0.032	JN
5103-71-9	alpha-Chlordane	0.0050	U
39765-80-5	trans-Nonachlor	0.0050	U
72-55-9	4,4'-DDE	0.076	þ
60-57-1	Dieldrin	0.010	U
72-54-8	4,4'-DDD	0.032	
5103-73-1	cis-Nonachlor	0.0050	U
50-29-3	4,4'-DDT	0.020-0.022	LEN
36355-01-8	Hexabromobiphenyl	0.020	U
8001-35-2	Toxaphene	0.20	U

Lab Name: Aquatec, Inc.

Lab Code: AQUAI

Contract: 91082

Case: BIO

Client ID No. K40369F

42788

Phase Type: Biota

Phase Weight: 10.0 g

Extraction: Soxhlet

Dilution Factor: 1.0

 Lab Sample ID:
 213410

 Date Received:
 03/08/94

 Date Extracted:
 03/25/94

 Date Analyzed:
 04/17/94

 Sulfur Clean-up:
 N

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	Q	
2052-07-5	2-Bromobiphenyl	0.010	U	1
2113-57-7	3-Bromobiphenyl	0.010	U	
92-66-0	4-Bromobiphenyl	0.010	U	1
118-74-1	Hexachlorobenzene	0.0050	U	1
58-89-9	gamma-BHC	0.0050	U	7
309-00-2	Aldrin	0.032	JN]
1024-57-3	Heptachlor Epoxide	0.0050	Ū	1
5103-74-2	gamma-Chlordane	0.012		R
5103-71-9	alpha-Chlordane	0.0050	U	1
39765-80-5	trans-Nonachlor	0.0050	U	1
72-55-9	4,4'-DDE	0.010	U	1
60-57-1	Dieldrin	0.010	U	1
72-54-8	4,4'-DDD	0.010	U	1
5103-73-1	cis-Nonachlor	0.0050	U]
50 29 3	4,4' DDT	0.017		IR.
36355-01-8	Hexabromobiphenyl	0.020	U	1
8001-35-2	Toxaphene	0.20	U	1

Lab Name: Aquatec, Inc.

Lab Code: AQUAI

Contract: 91082

Case: BIO

Client ID No.
K40369R

42788

Phase Type: Biota

Phase Weight: 10.0 g

Extraction: Soxhlet

1.0

Dilution Factor:

 Lab Sample ID:
 213411

 Date Received:
 03/08/94

 Date Extracted:
 03/25/94

 Date Analyzed:
 04/17/94

 Sulfur Clean-up:
 N

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	Q	
2052-07-5	2-Bromobiphenyl	0.010	U	
2113-57-7	3-Bromobiphenyl	0.010	U	
92-66-0	4-Bromobiphenyl	0.010	U	
118-74-1	Hexachlorobenzene	0.0050	U	
58-89-9	gamma-BHC	0.0050	U	
309-00-2	Aldrin	0.0050	U	
1024-57-3	Heptachlor Epoxide	0.032	7	
5103 74 2	gamma Chlordane	0.012		R
5103-71-9	alpha-Chlordane	0.0050	U	1
39765-80-5	trans-Nonachior	0.0050	U	
72-55-9	4,4'-DDE	0.010	U	
60-57-1	Dieldrin	0.010	U	
72-54-8	4,4'-DDD	0.010	U	
5103-73-1	cis-Nonachlor	0.0050	Ū	
50 29 3	4,4' DDT	0.024		R
36355-01-8	Hexabromobiphenyl	0.020	U	, ,
8001-35-2	Toxaphene	0.20	U	

Lab Name: Aquatec, Inc.

Lab Code: AQUAI

Contract: 91082

Case: BIO

Client ID No.
K40370F

SDG: 42788

Phase Type: Biota
Phase Weight: 10.0 g
Extraction: Soxhlet
Dilution Factor: 1.0

 Lab Sample ID:
 213413

 Date Received:
 03/08/94

 Date Extracted:
 03/25/94

 Date Analyzed:
 04/17/94

 Sulfur Clean-up:
 N

		/	
CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	Q
2052-07-5	2-Bromobiphenyl	0.010	υ
2113-57-7	3-Bromobiphenyl	0.010	U
92-66-0	4-Bromobiphenyl	0.010	U
118-74-1	Hexachlorobenzene	0.0050	U
58-89-9	gamma-BHC	0.0050	U
309-00-2	Aldrin	0.0050	U
1024-57-3	Heptachlor Epoxide	0.018	
5103-74-2	gamma-Chlordane	0.0066	
5103-71-9	alpha-Chlordane	0.0050	U
39765-80-5	trans-Nonachior	0.0050	U
72-55-9	4,4'-DDE	0.010	U
60-57-1	Dieldrin	0.010	υ
72-54-8	4,4'-DDD	0.010	U
5103-73-1	cis-Nonachlor	0.0050	U
50 29 3	4,4' DDT	0.012	
36355-01-8	Hexabromobiphenyl	0.020	U
8001-35-2	Toxaphene	0.20	U

R

Lab Name: Aquatec, Inc.
Lab Code: AQUAI
Contract: 91082
Case: BIO

Client ID No.
K40370R

SDG: 42788

Phase Type: Biota

Phase Weight: 10.0 g

Extraction: Soxhlet

Dilution Factor: 1.0

 Lab Sample ID:
 213414

 Date Received:
 03/08/94

 Date Extracted:
 03/25/94

 Date Analyzed:
 04/17/94

 Sulfur Clean-up:
 N

COMPOUND	CONCENTRATION (mg/Kg)	a
2-Bromobiphenyl	0.010	U
3-Bromobiphenyl	0.010	U
4-Bromobiphenyl	0.010	U
Hexachlorobenzene	0.0050	U
gamma-BHC	0.0050	U
Aldrin	0.043	
Heptachlor Epoxide	0.050	
gemme Chlordane	0.017	
alpha-Chlordane	0.0050	U
trans-Nonachlor	0.0050	U
4,4'-DDE	0.054	7
Dieldrin	0.010	U
4,4'-DDD	0.11	
cis-Nonachlor	0.0050	U
4.4' DDT	0.022	
Hexabromobiphenyl	0.020	U
Toxaphene	0.20	U
	2-Bromobiphenyl 3-Bromobiphenyl 4-Bromobiphenyl Hexachlorobenzene gamma-BHC Aldrin Heptachlor Epoxide gamma Chlordane alpha-Chlordane trans-Nonachlor 4,4'-DDE Dieldrin 4,4'-DDD cis-Nonachlor 4,4'-DDT Hexabromobiphenyl	Comp/Kg

MERCURY ANALYSES

Introduction

Analyses were performed according to USEPA CLP SOW ILM03.0.

The data validation process is intended to evaluate the data on a technical basis rather than a contract compliance basis. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission for validation. During the validation process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this valuation, qualifier codes may be added, deleted, or modified by the data validator. Validator qualified results are annotated with the following codes in accordance with National Functional Guidelines:

Concentration (C) qualifiers:

- U The analyte was analyzed for but not detected. The associated value is the instrument detection limit.
- B The reported value was obtained from a reading less than the contract required detection limit (CRDL) but greater than or equal to the instrument detection limit (IDL).

Quantitation (Q) qualifiers:

- E The reported value is estimated due to the presence of interference.
- M Duplicate injection precision not met.
- N Spiked sample recovery not within control limits.
- S Reported value was determined by the method of standard additions (MSA).
- W Post-digestion spike for Furnace-AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
- Duplicate analysis not within control limits.
- + Correlation coefficient for MSA is less than 0.995.

Validation qualifiers:

- J The analyte was positively identified; however, the associated numerical value is an estimated concentration only.
- UJ The analyte was not detected above the reported sample detection limit. However, the reported limit is approximate and may or may not represent the actual limit of detection.
- R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant QC problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC test, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

Data Assessment

1. Holding Time

The recommended holding times for mercury analyses is 28 days from tissue homogenization. All samples were analyzed within this holding time.

2. Blank Contamination

Quality assurance blanks, i.e., preparation and calibration blanks, are prepared to identify any contamination which may have been introduced into the samples during sample preparation or analysis. Preparation blanks measure laboratory contamination during preparation. Calibration blanks measure instrument contamination and sample cross-contamination.

All calibration and preparation blanks were found to be acceptable, with no analytes detected above the CRQL.

3. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of giving acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument is giving satisfactory daily performance.

3.1 Initial Calibration

The correlation coefficient of the initial calibration was greater than the minimum required 0.995.

3.2 Continuing Calibration

All continuing calibration verification standards were acceptable.

3.3 CRDL Standard

Recovery for one of the four CRDL standards was above control limits and recovery for one of the others was below control limits. None of the associated data fell in the affected range; therefore, no qualifiers were added to the samples.

4. Matrix Spike/Laboratory Duplicate

Matrix spike and laboratory duplicate data are used to assess the precision and accuracy of the analytical method.

4.1 Matrix spike

Recovery for the matrix spikes were within acceptable limits.

4.2 Laboratory Duplicate

The laboratory duplicates relative percent differences (RPD) were within acceptable limits.

5. Laboratory Control Sample (LCS)

All recoveries were within the acceptable recovery limits.

6. Serial Dilution

No ICP analyses were performed, therefore no serial dilution was necessary.

7. Furnace QC

No furnace analyses were performed.

8. Method of Standard Additions (MSA)

No MSA were performed.

9. System Performance and Overall Assessment

Overall system performance was acceptable. Other than those deviation specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

Data Validation Checksheets

	YES	NO	NA
Data Completeness and Deliverables			
Is there a narrative or cover letter present?	X		
Are the sample numbers included in the narrative?	X		
Are the sample chain-of-custodies present?	X		
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?		X	
Form I to IX			
Are all the Form I through Form IX labeled with:			
Laboratory name?	X		
Sample No.?	X		
SDG No.?	X		
Correct units?	X		
Matrix?	X		
Raw Data			
Is the digestion log for flame AA/ICP present?			X
Is the digestion log for furnace AA present?			Х
ls the distillation log for mercury present?	X		
ls the distillation log for cyanides present?			X
Are preparation dates present on sample preparation logs/bench sheets?	×		
Are the measurement read out records present for:			
ICP			X
Flame AA			X
Furnace AA			X
Mercury	X		
Cyanides			X
ls the data legible?	×		
s the data properly labeled?	×		
Holding Times			
Were mercury analyses performed within 28 days?	X		

	YES	NO	NA
Were cyanide distillations performed within 14 days?			X
Were other metal analysis performed within 6 months?			X
Form I (Final Data)			
Are all forms complete?	X		
Are correct units indicated on Form I's?	X		
Are all "less than IDL" values properly coded with "U"?	X		
Are the correct concentration qualifiers used with final data?	×		
Was a brief physical description of samples given on Form I's?		×	
Calibration			
Is a record of at least 2 point calibration present for ICP analysis?			X
Is a record of 5 point calibration present for Hg analysis?	X		
Is a record of 4 point calibration present for:			
Flame AA?			X
Furnace AA?			X
Cyanides?			X
Is one calibration standard at the CRDL level for all AA (except Hg) and cyanides analyses?			X
Is correlation coefficient less than .995 for:			
Mercury Analysis?	X		
Cyanide Analysis?			X
Atomic Absorption Analysis?			X
Form II A (Initial and Continuing Calibration Verifica	tion)		
Present and complete for every metal and cyanide?	X		
Are all calibration standards (initial and continuing) within control limits for:			
Metals (90-110 %R)?			X
Hg (80-120 %R)?	X		
Cyanides (85-115 %R)?			X

	YES	NO	NA
Was continuing calibration performed every 10 samples or every 2 hours?	X		
Was the ICV for cyanides distilled?			X
Form II B (CRDL Standards for AA and ICP)			
Was a CRDL standard (CRA) analyzed after initial calibration for all AA metals (except Hg)?			X
Was a mid-range calibration verification standard distilled and analyzed for cyanide analysis?			X
Was a 2xCRDL (or 2xIDL when IDL>CRDL) analyzed (CRI) for each ICP run?			X
Was CRI analyzed after ICV/ICB and before the final CCV/CCB, and twice every eight hours of ICP run?			X
Are CRA and CRI standards within control limits for metals (60-120 %R)?		X	
Is mid-range standard within control limits for cyanide (80-120 %R)			X
Form III (Initial and Continuing Calibration Blanks)			
Present and complete?	X		
Was an initial calibration blank analyzed?	X		
Was a continuing calibration blank analyzed after every 10 samples or every 2 hours (which ever is more frequent)?	X		
Are all calibration blanks (when IDL < CRDL) less than or equal to the Contract Required Detection Limits (CRDLs)?	X		
Are all calibration blanks less than two times Instrument Detection Limit (when IDL>CRDL)?			Х
Form III (Preparation Blank)			
Was one prep. blank analyzed for:			
each Sample Delivery Group SDG)?	x		
each batch of digested samples?	X		
each matrix type?	X		
Is concentration of prep. blank value greater than the CRDL when IDL is less than or equal to CRDL?		X	

	YES	NO	NA
If yes, is the concentration of the sample with the least concentrated analyte less than 10 times the prep. blank?			X
Is concentration of prep. blank value less than two times IDL, when IDL is greater than CRDL?			X
Is concentration of prep. blank below the negative CRDL?		X	
Form IV (ICP Interference Check Sample)			
Present and complete?			X
Was ICS analyzed at beginning and end of run (or at least twice every 8 hours)?			X
Are all Interference Check Sample results inside the control limits (±20%)?			Х
If no, is concentration of AI, Ca, Fe, or Mg lower than the respective concentration in ICS?	•		X
Form V A (Spiked Sample Recovery - Pre-Digestion/F	re-Distil	lation)	
Present and complete for:			
each SDG?	<u> </u>		
each matrix type?	X		
Was field blank used for spiked sample?		<u> </u>	
Are all recoveries within control limits (75-125)?	X		
If no, is sample concentration greater than or equal to four times spike concentration?			X
Are results outside the control limits (75-125%) flagged with "N" on Form I's and Form VA?			X
Are any spike recoveries:			
less than 10%?		<u> </u>	
between 10-74%?		X	
between 126-200%?		X	
greater than 200%?		X	
Form VI (Lab Duplicates)			
Present and complete for:			
each SDG?	X		

	YES	NO	NA
each matrix type?	X		
Was field blank used for duplicate analysis?		X	
Are all values within control limits (RPD 20% or difference ≤ ±CRDL)?	X		
If no, are all results outside the control limits flagged with an * on Form I's and VI?			X
Is any RPD (where sample and duplicate are both greater than or equal to 5 times CRDL) > 100%?		×	
Is any difference between sample and duplicate (where sample and/or duplicate is less than 5xCRDL) > 2xCRDL?			X
Form VII (Laboratory Control Sample)			
Was one LCS prepared and analyzed for:			
each SDG?	X		
each batch samples digested/distilled?	X		
Is LLCS "Found" value higher than the control limits on Form VII?		X	
Is LCS "Found" lower than the control limits on Form VII?		X	
Form IX (ICP Serial Dilution)	<u> </u>		
Was Serial Dilution analysis performed for:			
each SDG?			X
each matrix type?			X
Was field blank(s) used for Serial Dilution Analysis?		•	X
Are results outside control limit flagged with an "E"" on Form I's and Form IX when initial concentration on Form IX is equal to 50 times IDL or greater.			X
Are any % difference values:			
> 10%?			X
≥100%?			X
Furnace Atomic Absorbtion (AA) QC Analysis			
Are duplicate injections present in furnace raw data (except during full Method of Standard Addition) for each sample analyzed be GFAA?			X

	YES	NO	NA
Do the duplicate injection readings agree within 20% Relative Standard Deviation (RSD) or coefficient of Variation (CV) for concentration greater than CRDL?			×
Was a dilution analyzed for sample with analytical spike recovery less than 40%?			X
Is analytical spike recovery outside the control limits (85-115%) for any sample?			X
Form VIII (Method of Standard Addition Results)			
Present?		X	
If no, is any Form I result coded with "S" or a "+"?		X	
Is coefficient of correlation for MSA less than 0.990 for any sample?			X
Was MSA required for any sample but not performed?		X	
Is coefficient of correlation for MSA less than 0.995?			×
Are MSA calculations outside the linear range of the calibration curve generated at the beginning of the analytical run?			X
Was proper quantitation procedure followed as outlined in the SOW on page E-23?			X
Field Blank			
Is field blank concentration less than CRDL (or 2 x IDL when IDL > CRDL) for all parameters of associated aqueous and soil samples?			X
If no, was field blank value already rejected due to other QC criteria?			×
Form X, XI, XII (Verification of Instrumental Parameter	ers)		
Is verification report present for :			
Instrument Detection Limits (quarterly)?	X		
ICP Interelement Correlation Factors (annually)?			X
ICP Linear Ranges (quarterly)?			X
Form X (Instrument Detection Limits)			
Are IDLs present for:			
all the analytes?	X		
all the instruments used?	X		

	YES	NO	NA
Is IDL greater than CRDL for any analyte?		X	
If yes, is the concentration of Form I of the sample analyzed on the instrument whose IDL exceeds CRDL, greater than 5 x IDL.			X
Was any sample result higher linear range of ICP.			X
Was any sample result higher than the highest calibration standard for non-ICP parameters?		X	
If yes for any of the above, was the sample diluted to obtain the result on Form !?		-	X

Corrected Sample Analysis Data Sheets

U.S. EPA - CLP

1 EPA SAMPLE NO. INORGANIC ANALYSES DATA SHEET

Lab Name: AQU	ATEC		Contract: 91082			K40133F		
						SDG No.: 42788		
Matrix (soil/	water): FISH	-		La	b Samp	le ID: 213362		
Level (low/me	d): LOW_			Da	te Rec	eived: 03/08/94		
Solids:	100.	0						
c	oncentration	Units (ug	/L or mg/kg dry	, w	eight)	: MG/KG		
	CAS No.	Analyte	Concentration	С	Q	M		
	7429-90-5	Aluminum		- -		NR		
	7440-36-0	Antimony_		<u> </u>		NR		
	7440-38-2	Arsenic				NR		
	7440-39-3	Barium				NR		
	7440-41-7	3				NR		
	7440-43-9	Cadmium		_[_		NR		
	7440-70-2	Calcium_		_[_		NR		
	7440-47-3	Chromium_		_ -		NR		
	7440-48-4	Cobalt		_ -		NR		
		Copper		_ _		NR		
		Iron		_ -		NR NR		
		Lead		_ -		NR		
- •		Magnesium		-1-		NR NR		
		Manganese		-1-		NR CV		
		Mercury	0.24	-1-		CV		
		Nickel Potassium		-1-	 }	NR NR		
		Selenium	<u> </u>	-1-		NR NR		
		Silver		-1-		NR NR		
		Sodium Sodium		- -		NR NR		
		Thallium		- -		NR NR		
		Vanadium		- -		NR NR		
		Zinc		-1-	 }	NR		
		Cyanide		- -		NR		
olor Before:		Clarit	y Before:			Texture:		
olor After:		Clarit	y After:			Artifacts:		
omments:								

FORM I - IN

ILM02.1

U.S. EPA - CLP

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

Lab Name	: AQUATEC		Contract: 9	108	2	K40133	R
Lab Code	: AQUAI_	Case No.: BI	O SAS No.	: _		SDG No.:	42788_
Matrix	soil/water): FI	SH_		Lal	b Samp	le ID: 2133	63
Level (.ow/med): LO	w		Dat	te Rec	eived: 03/0	8/94
% Solids	: 10	0.0					
	Concentrati	on Units (ug	/L or mg/kg dry	y we	eight)	: MG/KG	
	CAS No.	Analyte	Concentration	С	Q	м	
	7429-90-	5 Aluminum_		_ _		NR	
	7440-36-			- -		NR	
	7440-38- 7440-39-			- -		NR NR	
	7440-39-			- -		NR NR	
	7440-43-	Cadmium		- -		NR	
	7440-70-			- -		NR	
	7440-47-					NR	
	7440-48-					NR	
	7440-50-6			_ _		NR	
	7439-89-6					NR NR	
L.	7439-92-	L Lead Magnesium		- -		NR NR	
	7439-96-9	Manganese		- -		NR	
		Mercury	0.19	- -		cv	
	7440-02-0	 		- -		NR	
	7440-09-7	Potassium				NR	
	7782-49-2					NR	
	7440-22-4			_ _		NR	
	7440-23-5			_ _		NR	
	7440-28-0 7440-62-2			- -		NR NR	
	7440-62-2			- -		NR NR	
	7440 00 0	Cyanide		- -		NR	
		-		- -			
Color Be	fore:	Clarit	y Before:	'~ 		Texture:	
Color Af	ter:	Clarit	y After:			Artifacts:	
Comments	:						

FORM I - IN

ILM02.1

U.S. EPA - CLP

1 INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

mab Name: AQI	UATEC		Contract: 9	108	2	K40135F
Lab Code: AQ	UAI_ Ca	ase No.: BI	O SAS No.	: _		SDG No.: 42788
Matrix (soil,	/water): FISH	H_		La	b Samp	le ID: 213365
Level (low/me	ed): LOW_			Da	te Rec	eived: 03/08/94
% Solids:	100.	. 0				
C	Concentration	units (ug	/L or mg/kg dr	y w	eight):	: MG/KG
	CAS No.	Analyte	Concentration	С	Q	м
	7429-90-5	Aluminum		- -		NR
	7440-36-0	Antimony_		- -		NR
	7440-38-2	Arsenic		- -		NR
	7440-39-3	Barium				NR
	7440-41-7			_ -		NR
		Cadmium_		_ -		NR
	7440-70-2 7440-47-3	Calcium Chromium		- -		NR NR
		Cobalt		- -		NR NR
		Copper		- -		NR
		Iron —		- -		NR
		Lead		- -		NR
<u>.</u>		Magnesium				NR
		Manganese				NR
		Mercury_	0.20	_ _		CV
		Nickel Potassium		- -		NR NR
		Selenium		- -		NR NR
		Silver		- -		NR
	7440-23-5			- -		NR
		Thallium		- -		NR
	7440-62-2	Vanadium_				NR
	7440-66-6	Zinc				NR
		Cyanide		- -		NR
	l	l	l	_!_	1	1
color Before:		Clarit	y Before:			Texture:
olor After:		Clarit	y After:			Artifacts:
omments:						
	· · · · · · · · · · · · · · · · · · ·					
			· · · · · · · · · · · · · · · · · · ·			· · · · · · · · · · · · · · · · · · ·

FORM I - IN

ILM02.1

1

EPA SAMPLE NO.

		INORGANIC	ANALYSES DATA	SHEET		
₹ab Name: AQU	ATEC		Contract: 9	1082_		K40135R
						SDG No.: 42788
Matrix (soil/	water): FISH	I_	-	Lab	Sample	ID: 213366
Level (low/me	d): LOW	_		Date	Recei	ved: 03/08/94
	100.					
			/L or mg/kg dr	y wei	ght):	MG/KG
	CAS No.	Analyte	Concentration	С	Q M	
	7429-90-5 7440-36-0 7440-38-2				N N	R
	7440-39-3 7440-41-7	Barium Beryllium			N N	R R
	7440-43-9 7440-70-2	CadmiumCalcium			N N	R
	7440-47-3 7440-48-4	Cobalt		_ _	N.	R
	7440-50-8 7439-89-6	Copper			N	
	7439-92-1	Lead			N.	R
	7439-95-4 7439-96-5	Magnesium Manganese		-	N N	
	7439-97-6	Mercury	0.17		C	v
	7440-02-0	Nickel			и	
		Potassium		-	N	
	7782-49-2 7440-22-4	Selenium_ Silver		-	N	
	7440-23-5			-	N	
	7440-28-0			_	N	
	7440-62-2	Vanadium_			N N	
	7440-66-6	Zinc		-1-	N	
		Cyanide			N	K .
olor Before:		Clarit	y Before:		T	exture:
olor After:		Clarit	y After:		A	rtifacts:

FORM I - IN

INORGANIC ANALYSES DATA SHEET EPA SAMPLE NO.

Mame: AQU	ATEC		Contract: 9	1082	K40	136F
Lab Code: AQU	AI_ Ca	se No.: BI	O SAS No.	•	SDG No	.: 42788
Matrix (soil/	water): FISH	I _		Lab Sam	ple ID: 2	13368
Level (low/me	d): LOW_	_		Date Re	ceived: 0	3/08/94
& Solids:	100.	0				
С	oncentration	Units (ug	/L or mg/kg dry	y weight): MG/KG	
					T., I	
	CAS No.	Analyte	Concentration	C Q	M	
	7429-90-5	Aluminum		-	NR	
		Antimony		-	NR	
	7440-38-2	Arsenic			NR	
	7440-39-3	Barium			NR	
	7440-41-7	Beryllium		_	NR	
		Cadmium_		_	NR NR	
		Calcium		-	- NR NR	
		Cobalt		-1	- NR	
		Copper		-	- NR	
		Iron		-	- NR	
		Lead		_	NR	
_		Magnesium		-	NR	
7		Manganese		-	NR NR	
		Mercury	0.14		[cv	
	7440-02-0	Nickel			NR	
		Potassium			NR	
		Selenium_		_	NR	
	7440-22-4	Silver		-1	NR NR	
	7440-23-5	Sodium		_	NR ND	
	7440-28-0	Thallium_ Vanadium		-	NR NR	
	7440-62-2	Zinc Zinc		-	- NR	
	140 00 0	Cyanide		-	- NR	
olor Before:		Clarit	y Before:		Texture:	
olor After:		Clarit	y After:		Artifact	s:
omments:						

FORM I - IN

1 INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

		THOUGHITC	ANALISES DAIA	SHEEL	1
Lab Name: AQU	ATEC		Contract: 9	1082	K40136R
					SDG No.: 42788
Matrix (soil/	Matrix (soil/water): FISH			Lab Samp	ple ID: 213369
Level (low/me	d): LOW			Date Rec	ceived: 03/08/94
	-			Date ne	301700/34
& Solids:	100.	0			
C	oncentration	Units (ug	/L or mg/kg dr	y weight)	: MG/KG
	CAS No.	Analyte	Concentration	C Q	м
	7429-90-5	Aluminum		-	NR NR
	7440-36-0	Antimony_		_	- NR
	7440-38-2	Arsenic			NR
	7440-39-3	Barium			NR
	7440-41-7 7440-43-9	Beryllium Cadmium			NR NR
	7440-70-2				NR NR
	7440-47-3	Chromium		-	NR
	7440-48-4	Cobalt			NR
	7440-50-8	Copper			NR
	7439-89-6	Iron			NR
	7439~92-1	Lead			NR NR
•	7439-95-4 7439-96-5	Magnesium Manganese		-	NR NR
	7439-97-6	Mercury	0.08		·
		Nickel -		-	NR
	7440-09-7	Potassium			NR
		Selenium_			NR
		Silver		_	NR
		Sodium Thallium		_	NR NR
		Vanadium Vanadium		-	NR NR
		Zinc		-	NR
		Cyanide			NR
olor Before:		Clarit	y Before:		Texture:
olor After:		Clarit	y After:		Artifacts:
omments:					
	·				

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

ab Code: AQUA	.I_ Ca	se No.: BI	O SAS NO	_		
			SAS NO.	• -		SDG No.: 4278
itrix (soil/w	vater): FISH	<u>. </u>		La	ab Samp	le ID: 213371
evel (low/med): LOW_	_		Da	ate Rec	eived: 03/08/94
Solids:	100.	0				
Со	ncentration	Units (ug	/L or mg/kg dry	y w	veight):	: MG/KG
	CAS No.	Analyte	Concentration	С	Q	м
	7429-90-5	Aluminum	· · · · · · · · · · · · · · · · · · ·	-		NR
	7440-36-0	Antimony				NR
	7440-38-2	Arsenic		_		NR
	7440-39-3	Barium		_		NR
	7440-41-7 7440-43-9	Beryllium Cadmium		-		NR NR
		Calcium Calcium		-		NR NR
		Chromium		-		NR
		Cobalt		-1		NR
		Copper		-		NR
Ţ	7439-89-6	Iron				NR
		Lead				NR
		Magnesium		_		NR
		Manganese		_		NR
	7439-97-6 7440-02-0	Mercury Nickel	0.20	-		CV
-		Potassium		-1		NR NR
		Selenium		-1		NR
		Silver		-1		NR
		Sodium		-		NR
		Thallium		-1		NR
		Vanadium_		$\exists 1$		NR
		Zinc				NR
		Cyanide		- -		NR
lor Before:		Clarit	y Before:		· ·	Texture:
lor After:		Clarit	y After:			Artifacts:
ments:	_					

FORM I - IN

INORGANIC ANALYSES DATA SHEET EPA SAMPLE NO.

ab Name: AQU	ATEC		Contract: 9	1082		K40137R
						SDG No.: 42788
atrix (soil/	water): FISH	i_		Lab :	Sample	e ID: 213372
evel (low/med	d): LOW_			Date	Rece	ived: 03/08/94
Solids:	100.	0				
Co	oncentration	Units (ug	/L or mg/kg dry	y weig	ght):	MG/KG
	CAS No.	Analyte	Concentration	c	2 1	<u>-</u>
	7429-90-5					TR
	7440-36-0	Antimony_		_ -		IR
		Arsenic		-		IR I
		Barium Beryllium		-		IR IR
		Cadmium				IR
		Calcium				IR
		Chromium				IR
		Cobalt		-		ir
	1	Copper		-		IR
	7439-89-6	Iron —	·	-1		IR .
		Lead		-		IR .
		Magnesium	·	-		IR .
	7439-96-5			-		IR .
		Mercury	0.10	-	c	·V
		Nickel -		-	N	TR
	7440-09-7				N	TR
	7782-49-2	Selenium		_	N	IR.
	7440-22-4	Silver			N N	TR
		Sodium				R
		Thallium_				TR
		Vanadium_				R
	7440-66-6	Zinc				R
		Cyanide			N	R
				_	_	
or Before:			y Before:			exture:
or After:		Clarit	y After:		A	rtifacts:
mments:						

FORM I - IN

INORGANIC ANALYSES DATA SHEET EPA SAMPLE NO.

Lab Name: AQU	JATEC		Contract: 9	1082		K40138F
Lab Code: AOU	JAI Ca	se No.: BI	O SAS No.	:		SDG No.: 42788
•						•
Matrix (soil,	/water): FISH	<u>-</u>		Lab	Sampl	e ID: 213374
Level (low/me	ed): LOW_			Dat	e Rece	ived: 03/08/94
Solids:	100.	0				
borras.	100.	•				
c	Concentration	Units (ug	/L or mg/kg dr	y we	ight):	MG/KG
				П		
	CAS No.	Analyte	Concentration	C	Q	M
	7429-90-5	Aluminum	l 	- -		NR
	7440-36-0	Antimony	l	- -		NR
	7440-38-2	Arsenic		- -		NR
	7440-39-3	Barium		- -		NR
	7440-41-7	Beryllium		- -		NR
		Cadmium		- -		NR
	7440-70-2	Calcium		- -		NR
	7440-47-3	Chromium		- -		NR
		Cobalt -		- -		nr
	7440-50-8	Copper		- -		NR
	7439-89-6	Iron —		- -		NR
	7439-92-1	Lead		- -		NR
-	7439-95-4	Magnesium		- -		NR
•		Manganese		- -	1	NR
	7439-97-6	Mercury	0.23	- -		cv
	7440-02-0	Nickel				NR
	7440-09-7	Potassium				NR
		Selenium_		_ _		NR
		Silver				NR
		Sodium				NR
		Thallium			1	NR
		Vanadium_				NR
	7440-66-6	Zinc				NR
		Cyanide			1	NR
						1
olor Before:		Clarit	y Before:		:	Texture:
olor After:		Clarit	y After:		1	Artifacts:
omments:						***************************************
		· - · · · · · · · · · · · · · · · · · · ·				·
						· · · · · · · · · · · · · · · · · · ·
						·

FORM I - IN

1 INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

		THOUGHTE	WWTI2F2 DAIN	Juet.	*	,
T ab Name: AQU	JATEC		Contract: 9	1082		K40138R
						SDG No.: 42788
Matrix (soil/	_				_	le ID: 213375
		_			-	
Level (low/me	ed): LOW_			Date	e Rece	eived: 03/08/94
% Solids:	100.	0				
C	oncentration	Units (ug	/L or mg/kg dry	y wei	ight):	MG/KG
	CAS No.	Analyte	Concentration	c	Q	М
Color Before: Color After:	7440-38-2 7440-39-3 7440-41-7 7440-43-9 7440-47-3 7440-48-4 7440-50-8 7439-89-6 7439-95-4 7439-95-4 7439-96-5 7439-97-6 7440-02-0 7440-02-0 7440-23-5 7440-23-5 7440-66-6	Antimony Arsenic Barium Beryllium Cadmium Calcium Chromium Chromium Cobalt Copper Iron Lead Magnesium Manganese Mercury Nickel Potassium Selenium Silver Sodium Thallium Vanadium Zinc Cyanide Clarit	y Before:			NR N
Comments:			·			
						

FORM I - IN

1 EPA SAMPLE NO. INORGANIC ANALYSES DATA SHEET

Lab Name: AQU	ATEC		Contract: 9	1082	K40140F
					SDG No.: 42788_
Matrix (soil/	water): FISH	<u> </u>		Lab Samp	ole ID: 213377
Level (low/med	d): LOW_			Date Rec	eived: 03/08/94
% Solids:	100.	0			
C	oncentration	Units (ug	/L or mg/kg dry	y weight)	: MG/KG
	1		,		 1
•	CAS No.	Analyte	Concentration	C Q	м
	7429-90-5	Aluminum		-	NR
	7440-36-0	Antimony_			NR
	7440-38-2	Arsenic_			NR
	7440-39-3	Barium		_	NR
	7440-41-7	Beryllium		-	NR
	1	CadmiumCalcium			NR NR
	7440-47-3	Calcium_ Chromium			NR
	7440-48-4			-	NR
		Copper			NR
	7439-89-6	Iron			NR
		Lead			NR
		Magnesium			NR
-		Manganese		_	NR
		Mercury_ Nickel	0.12	-	CV NR
		Potassium	·		NR NR
		Selenium		-	NR
		Silver		-	NR
	7440-23-5				NR
	7440-28-0	Thallium_			NR
		Vanadium_			NR
	7440-66-6	Zinc			NR
	\	Cyanide		-	NR
color Before:		Clarit	y Before:		Texture:
Color After:		Clarit	y After:		Artifacts:
					-
Comments:					
	_			_	

FORM I - IN

INORGANIC ANALYSES DATA SHEET EPA SAMPLE NO.

Lab Name: AQU	ATEC		Contract: 9:	1082	K40140R
					SDG No.: 42788
Matrix (soil/v	water): FISH	I_	•	Lab Samp	ele ID: 213378
Level (low/med	i): LOW_	<u></u>		Date Rec	eived: 03/08/94
% Solids:	100.	0			•
Co	oncentration	Units (ug	/L or mg/kg dry	y weight)	: MG/KG
	CAS No.	Analyte	Concentration	C Q	м
	7429-90-5	Aluminum		-	NR
	7440-36-0	Antimony			NR
	7440-38-2	Arsenic -		_	NR NB
	7440-39-3 7440-41-7	Barium Beryllium		'-	NR NR
	7440-41-7	Cadmium		1-	NR NR
	7440-70-2				NR
	7440-47-3	Chromium_			NR
	7440-48-4	Cobalt		'_	NR
	7440-50-8	Copper		`-	NR ND
	7439-89-6 7439-92-1	Iron			NR NR
_	7439-92-1	Magnesium		·-	NR NR
~	7439-96-5	Manganese			NR
	7439-97-6	Mercury	0.10		cv
	7440-02-0	Nickel			NR
	7440-09-7	Potassium		-	NR ND
	7782-49-2 7440-22-4	Silver -			NR NR
	7440-22-4	Sodium-			NR NR
	7440-28-0		· ————————————————————————————————————	-	NR
	7440-62-2	Vanadium		_	NR
		Zinc			NR
		Cyanide		-	NR
halam Defe	I [ا ــــــــــــــــــــــــــــــــــــ	l		
Color Before:			y Before:		Texture:
Color After:		Clarit	y After:		Artifacts:
Comments:					

FORM I - IN

I EPA SAMPLE NO. INORGANIC ANALYSES DATA SHEET

Name: NO!	ATEC		Contract: 9	1022	ı	K40350F
						CDC No. : 40500
ab Code: AQU	wī Ca	se No.: BI	O SAS NO.	• —		SDG No.: 42788
atrix (soil/	water): FISH	<u>-</u>		Lab	Samp	le ID: 213380
evel (low/me	d): LOW_	_		Dat	e Rec	eived: 03/08/94
Solids:	100.	0				
С	oncentration	Units (ug	/L or mg/kg dry	y we	ight)	: MG/KG
						T 1
	CAS No.	Analyte	Concentration	C	Q	M
	7429-90-5	Aluminum		- -		NR
	7440-36-0	Antimony		- -		NR
	7440-38-2	Arsenic				NR
		Barium				NR
	7440-41-7	Beryllium				NR
	7440-43-9					NR
		Calcium_				NR
		Chromium_		_/_		NR
		Cobalt		_ _		NR
		Copper		_ _		NR
		Iron		_ _		NR
		Lead		_ _		NR
_		Magnesium		_ _		NR NR
		Manganese		-1-		NR
	7439-97-6	Mercury_	0.07	-1-		CV
	7440-02-0			- -		NR ND
	7440-09-7	1		- -		NR
	7782-49-2			- -		NR ND
		Silver		- -		NR
		Sodium Thallium		- -		NR ND
		Vanadium		-1-		NR NR
	1			- -		NR NP
	7440-66-6	Zinc		- -		NR NR
		Cyanide		_ _		1417
lor Before:		Clarit	y Before:			Texture:
lor After:		Clarit	y After:			Artifacts:
mments:						
	 		<u> </u>			
				_		

FORM I - IN

1 INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

Lab Name: AQUATEC Contract: 91082	350R
Lab Code: AQUAI	
	.: 42788
Matrix (soil/water): FISH_ Lab Sample ID: 2:	13381
Level (low/med): LOW Date Received: 03	3/08/94
Solids: 100.0	
Concentration Units (ug/L or mg/kg dry weight): MG/KG	
CAS No. Analyte Concentration C Q M	
7429-90-5 Aluminum NR	
7440-36-0 Antimony NR	
7440-38-2 Arsenic NR	
7440-39-3 Barium	
7440-43-9 Cadmium - NR	
7440-70-2 Calcium NR	
7440-47-3 Chromium NR	
7440-48-4 Cobalt NR	
7440-50-8 Copper NR	
7439-89-6 Iron NR	
7439-92-1 Lead	
7439-95-4 Magnesium NR NR NR NR	
7439-97-6 Mercury 0.07 - CV	
7440-02-0 Nickel NR	
7440-09-7 Potassium NR	
7782-49-2 Selenium	
7440-22-4 Silver NR	
7440-23-5 Sodium NR NR NR	
7440-28-0 Thallium NR NR Vanadium	
7440-66-6 Zinc - - NR	
Cyanide NR	
color Before: Clarity Before: Texture:	
olor After: Clarity After: Artifact	s:
Comments:	

FORM I - IN

1 INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

		INURGANIC	ANALYSES DATA	SUFFI	1
Tab Name: AÇ	UATEC		Contract: 9	1082	K40351F
					SDG No.: 42788
Matrix (soil	/water): FIS	·-		Lab Samp	ole ID: 213383
Level (low/m	ed): LOW_			Date Rec	eived: 03/08/94
% Solids:	100.	0			
•	Concentration	Units (ug	/L or mg/kg dry	y weight)	: MG/KG
	CAS No.	Analyte	Concentration	C Q	м
·	7440-23-5	Antimony Arsenic Barium Beryllium Cadmium Calcium Chromium Cobalt Copper Iron Lead Magnesium Manganese Mercury Nickel Potassium Selenium Silver Sodium	0.36		NR NR NR NR NR NR NR NR NR NR NR NR NR N
color Before:	7440-62-2	Thallium_Vanadium_Zinc_Cyanide	y Before:		NR NR NR NR Texture:
Color After:			y After:		Artifacts:
omments:			, areer.		AL CITACUS.

FORM I - IN

INORGANIC ANALYSES DATA SHEET EPA SAMPLE NO.

Lab Name: AQUA	ATEC		Contract: 9	1082		K40351R
•						SDG No.: 42788
Matrix (soil/w						- ID: 213384
		_				
Level (low/med	1): LOW_	_		Date R	leceı	ved: 03/08/94
% Solids:	100.	0				
Co	ncentration	Units (ug	/L or mg/kg dry	y weigh	t):	MG/KG
	CAS No.	Analyte	Concentration	C Q	м	
	7429-90-5					R
	7440-36-0	Antimony_				R
	7440-38-2 7440-39-3	Arsenic Barium		-		R
	7440-33-3	Beryllium				R
	7440-43-9	Cadmium		-		R
	7440-70-2	Calcium		-	N	
	7440-47-3	Chromium_			и	
	7440-48-4	Cobalt		_	N	
	7440-50-8	Copper		_	N	
	7439-89-6 7439-92-1	Iron			N	
(7439-95-4	Magnesium		-	$- _{N}$	
	7439-96-5	Manganese		-	- N	
	7439-97-6	Mercury	0.28	-	_ c	
•	7440-02-0	Nickel			N	
	7440-09-7	Potassium		_	_ N	
	7782-49-2 7440-22-4	Selenium_ Silver		_	$- _{\mathbf{N}}$	
	7440-23-5	Sodium Sodium		-	$- _{N}$	
	7440-28-0	Thallium			- N	
	7440-62-2	Vanadium		_	N	
	7440-66-6	Zinc			N	
		Cyanide		_	N	R
				_1	!	_1
Color Before:		Clarit	y Before:		T	exture:
Color After:		Clarit	y After:		A:	rtifacts:
Comments:		···				
						

FORM I - IN

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

Tab Name: AQU	ATEC	·	Contract: 9	1082	K40352F
					SDG No.: 42788
Matrix (soil/	water): FISH	<u>_</u>		Lab Sam	ple ID: 213386
Level (low/me	d): LOW			Date Re	ceived: 03/08/94
	•	_			,
Solids:	100.	U			
С	oncentration	Units (ug	/L or mg/kg dry	y weight): MG/KG
	CAS No.	Analyte	Concentration	C Q	м
	3430-00-5	111111111111			- 175
	7429-90-5 7440-36-0	Antimony_		- 	NR NR
		Arsenic -		-	- NR
	7440-39-3	Barium -			NR
	7440-41-7				NR
	7440-43-9				NR
	7440-70-2	Calcium_		_]	NR
	7440-47-3 7440-48-4	Chromium_ Cobalt		_ -	NR
	7440-50-8	Copper			NR NR
	7439-89-6	Iron		-	- NR
		Lead			NR
	7439-95-4	Magnesium		_	NR
1	7439-96-5	Manganese			NR
			0.12		CV
					NR
	7440-09-7	Potassium Selenium		-1	NR
		Silver		-1	NR NR
		Sodium		-	- NR
		Thallium		-	- NR
		Vanadium		-	NR
		Zinc			NR
		Cyanide		_	NR
olor Before:		Clarit	y Before:		Texture:
olor After:		Clarit	y After:		Artifacts:
omments:					
omments:					

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1 INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

•	AT Ca					
+in /il/	···	se No.: BI	O SAS No.	: _		SDG No.: 4278
(SO11/	water): FISH	<u>-</u>		La	b Samp	le ID: 213387
vel (low/me	d): LOW_			Da	te Rec	eived: 03/08/94
Solids:	100.	0				
C	oncentration	Units (ug	/L or mg/kg dry	y w	eight)	: MG/KG
	CAS No.	Analyte	Concentration	С	Q	м
		_		_		
	7429-90-5	Aluminum_		_		NR NR
	7440-36-0 7440-38-2	Antimony_ Arsenic		-		NR NR
	7440-38-2	Barium		-	 j	NR NR
	7440-41-7	Beryllium		-1		NR
	7440-43-9	Cadmium				NR
	7440-70-2	Calcium		-		NR
	7440-47-3	Chromium		-		NR
	7440-48-4			-		NR
	7440-50-8	Copper		-		NR
	7439-89-6	Iron -		-1.		NR
	7439-92-1	Lead				NR
	7439-95-4	Magnesium		-1		NR
	7439-96-5	Manganese				NR
	7439-97-6	Mercury	0.08			CV
	7440-02-0	Nickel				NR
	7440-09-7	1 1		$\equiv 1$		NR
	7782-49-2	Selenium_				NR
		Silver				NR
		Sodium		\Box 1.		NR
		Thallium_		$\Box 1$		NR
	P .	Vanadium_		_1.		NR
	7440-66-6	Zinc		_ .		NR
		Cyanide		_ .		NR
				_!.		
or Before:		Clarit	y Before:			Texture:
or After:		Clarit	y After:			Artifacts:
ments:						

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1 EPA SAMPLE NO. INORGANIC ANALYSES DATA SHEET

Lab Name: AQU	ATEC		Contract: 9	1082	K40353F
					SDG No.: 42788_
Matrix (soil/	water): FISH	I _		Lab Samp	ole ID: 213389
Level (low/med	d): LOW_	_		Date Rec	eived: 03/08/94
% Solids:	100.	0			
Co	oncentration	Units (ug	/L or mg/kg dr	y weight)	: MG/KG
	CAS No.	Analyte	Concentration	C Q	м
	7429-90-5	Aluminum		-	NR
	7440-36-0	Antimony_		-	NR NR
	7440-38-2	Arsenic		-	NR
	7440-39-3	Barium			NR
	7440-41-7	Beryllium			NR
	7440-43-9	Cadmium_		_	NR
	7440-70-2 7440-47-3	Calcium		-	NR ND
	7440-47-3	Chromium_ Cobalt		-	NR NR
	7440-50-8	Copper		- 	NR
	7439-89-6	Iron —		-	NR
	7439-92-1	Lead			NR
=	7439-95-4	Magnesium			NR
	7439-96-5	Manganese			NR
	7439-97-6	Mercury	0.13		CA
		Nickel Potassium		-	NR NR
	7782-49-2	Selenium			NR
		Silver			NR
		Sodium		-	NR
	7440-28-0	Thallium_			NR
		Vanadium_			NR
	7440-66-6	Zinc		_	NR
		Cyanide			NR NR
Color Before:		Clarit	y Before:		Texture:
Color After:		Clarit	y After:		Artifacts:
Comments:					
					
					

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

				- · - -	1
Name:	AQUATEC		Contract: 9	1082	K40353R
Lab Code:	AQUAI_ Ca	ase No.: BI	O SAS No.	:	SDG No.: 42788
Matrix (so	oil/water): FISH	<u> </u>		Lab Samp	ole ID: 213390
Level (low	/med): LOW_	_		Date Rec	eived: 03/08/94
% Solids:	100.	0			
	Concentration	Units (ug	/L or mg/kg dry	y weight)	: MG/KG
	CAS No.	Analyte	Concentration	C Q	м
Color Befor	7429-90-5 7440-36-0 7440-38-2 7440-39-3 7440-41-7 7440-43-9 7440-47-3 7440-48-4 7440-50-8 7439-92-1 7439-95-4 7439-96-5 7439-97-6 7440-02-0 7440-09-7 7782-49-2 7440-23-5 7440-28-0 7440-66-6	Antimony Arsenic Barium Beryllium Cadmium Cadmium Cobalt Copper Iron Lead Magnesium Manganese Mercury Nickel Potassium Selenium Silver Sodium Thallium Vanadium Zinc Cyanide	o.10 y Before:		NR N
Color After	·	Clarit	y After:		Artifacts:
Comments:				······································	

1 INORGANIC ANALYSES DATA SHEET

EPA	SAMPLE	NO.
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್ತಾರಿ Name: AQU	ATEC		Contract: 9	1082	!	K40354F
						SDG No.: 42788
Matrix (soil/						le ID: 213392
Level (low/med	d): LOW_	_		Dat	e Rec	eived: 03/08/94
& Solids:	100.	0				
C	oncentration	Units (ug	/L or mg/kg dry	y we	ight)	: MG/KG
	CAS No.	Analyte	Concentration	С	Q	м
	7429-90-5			- -		NR
	7440-36-0	Antimony_				NR
	7440-38-2 7440-39-3	Arsenic		- -		NR NR
	7440-41-7	Beryllium		- -		NR
	7440-43-9	Cadmium				NR
	7440-70-2	Calcium_				NR
	7440-47-3	Chromium_		_ -		NR
	7440-48-4 7440-50-8	Cobalt Copper		- -		NR NR
	7439-89-6	Iron —		- -		NR
	7439-92-1	Lead		- -		NR
		Magnesium				NR
		Manganese				NR
	7439-97-6	Mercury	0.07	_ _		CV
		Nickel Potassium		- -		NR NR
	7782-49-2	Selenium		- -		NR
		Silver		- -		NR
	7440-23-5	Sodium				NR
		Thallium_				NR
	7440-62-2 7440-66-6	Vanadium_ Zinc		_ -		NR
	7440-66-6	Cyanide		- -		NR NR
olor Before:		Clarit	y Before:			Texture:
olor After:		Clarit	y After:			Artifacts:
omments:						

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1 INORGANIC ANALYSES DATA SHEET

EPA	SAMPLE	NO.
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					1
Lab Name: AQU	ATEC		Contract: 9	1082	K40354R
					SDG No.: 42788
Matrix (soil/	water): FISH	f_		Lab Samp	ole ID: 213393
Level (low/me	d): LOW			Date Rec	eived: 03/08/94
	-				
Solids:	100.	U			
C	oncentration	Units (ug	/L or mg/kg dr	y weight)	: MG/KG
	CAS No.	Analyte	Concentration	C Q	м
	7429-90-5	Aluminum		-	NR
	7440-36-0	Antimony_		-	NR
	7440-38-2	Arsenic_			NR
	7440-39-3	Barium			NR
		Beryllium Cadmium		-	NR NR
	7440-70-2	Cadmium Calcium		-	NR NR
	7440-47-3	Chromium		-	NR
	7440-48-4	Cobalt			NR
	1	Copper		_	NR
		Iron			NR
		Lead Magnesium			NR NR
1		Manganese		- 	NR
		Mercury	0.05	-	CV
	7440-02-0	Nickel			NR
	7440-09-7	Potassium		_	NR
		Selenium_			NR
		Silver Sodium		_	NR NR
		Thallium		-	NR
		Vanadium			NR
	7440-66-6	Zinc -			NR
		Cyanide			NR
	l	 		_1	1
olor Before:		Clarit	y Before:		Texture:
olor After:		Clarit	y After:		Artifacts:
omments:					•
			<u>.</u>		
		· · · · · · · · · · · · · · · · ·		 	

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INORGANIC ANALYSES DATA SHEET EPA SAMPLE NO.

Level (low/med): LOW Date Received: 03/ * Solids: 100.0 Concentration Units (ug/L or mg/kg dry weight): MG/KG CAS No.	
Level (low/med): LOW Date Received: 03/ * Solids: 100.0 Concentration Units (ug/L or mg/kg dry weight): MG/KG CAS No. Analyte Concentration C Q M 7429-90-5 Aluminum	
Concentration Units (ug/L or mg/kg dry weight): MG/KG CAS No.	3395
Cas No.	08/94
CAS No.	
T429-90-5	
T440-36-0	
T440-36-0	
7440-38-2	
7440-41-7 7440-43-9 7440-70-2 Calcium 7440-47-3 Chromium Cobalt 7440-50-8 Copper 7439-89-6 Tron 7439-92-1 Cead Tron Transport Magnesium Magnesium Magnese Manganese Marcury Magnesium Magnese Marcury Marcury Magnese Marcury Magnese Marcury Magnese Marcury Magnese Marcury Marc	
7440-43-9	
7440-43-9	
7440-47-3 7440-48-4 Cobalt 7440-50-8 Copper 7439-89-6 Iron 7439-95-4 Magnesium 7439-96-5 Manganese 7440-02-0 Nickel 7440-09-7 Potassium 7782-49-2 Selenium 7440-23-5 Sodium 7440-28-0 Thallium 7440-62-2 Vanadium NR	
7440-48-4 Cobalt	
7440-50-8 Copper	
7439-89-6 Iron	
7439-92-1 Lead NR NR NR NR NR NR NR N	
7439-95-4 Magnesium NR 7439-96-5 Manganese NR 7449-97-6 Mercury 0.03 7440-02-0 Nickel NR 7440-09-7 Potassium NR 7782-49-2 Selenium NR 7440-22-4 Silver NR 7440-23-5 Sodium NR 7440-62-2 Vanadium NR	
7439-96-5 Manganese	
7440-02-0 Nickel	
7440-02-0 Nickel NR NR NR NR NR NR NR N	
7440-09-7 Potassium	
7782-49-2 Selenium	
7440-23-5 Sodium	
7440-28-0 Thallium NR NR Vanadium NR	
7440-62-2 Vanadium	
7440-66-6 Zinc NR	
CyanideNR	
color Before: Clarity Before: Texture:	
olor After: Clarity After: Artifacts	:
Comments:	
	
	

1 EPA SAMPLE NO. INORGANIC ANALYSES DATA SHEET

Lab Name: AQU	ATEC	·	Contract: 9	1082		K40359R
Lab Code: AQU	AI_ Ca	se No.: BI	O SAS No.	:		SDG No.: 42788
Matrix (soil/	— ,					.e ID: 213396
					_	
Level (low/med	1): LOW_	-		Dat	е кесе	eived: 03/08/94
% Solids:	100.	0				
Co	ncentration	Units (ug	/L or mg/kg dry	y we	ight):	MG/KG
			I			
	CAS No.	Analyte	Concentration	C	Q	M
	7429-90-5			- -		NR
		Antimony_				NR
		Arsenic				NR
	7440-39-3	Barium		- -		NR
	7440-41-7 7440-43-9	Beryllium Cadmium				NR
		Calcium		- -		NR NR
	7440-70-2					NR NR
		Cobalt		- -		NR
		Copper		-1-		NR
	B)	Iron		- -		NR
		Lead		- -		NR
-		Magnesium		-1-		NR
	7439-96-5	Manganese		- -	:	NR
	7439-97-6	Mercury	0.01	B		CV
	7440-02-0	Nickel		_ _		NR
	7440-09-7			= $ $		NR
	7782-49-2			_ _		NR
	7440-22-4			-		NR
	1	Sodium_		_ _		NR
		Thallium_		_		NR
		Vanadium_		_ _		NR
	7440-66-6	Zinc		_ _		NR
		Cyanide		- -		NR
	l !	I	l	_!_	·.	 !
color Before:		Clarit	y Before:		•	Texture:
color After:		Clarit	y After:		j	Artifacts:
omments:						
	·					
						
 						

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

		INORGANIC	ANALYSES DATA	SHE	ET	1	
h Name: AQ	UATEC		Contract: 9	108	2	K40361F	
Lab Code: AQ	UAI_ C	ase No.: BI	O SAS No.	: _		SDG No.: 427	88_
Matrix (soil	/water): FIS	H_		La	b Samp	le ID: 213398	
Level (low/m	ed): LOW_			Da	te Rec	eived: 03/08/9	4
% Solids:	100.	. 0					
(Concentration	n Units (ug	/L or mg/kg dr	y w	eight)	: MG/KG	
	CAS No.	Analyte	Concentration	С	Q	М	
	7429-90-5 7440-36-0	Aluminum_ Antimony_				NR NR	
	7440-38-2	Arsenic				NR	
	7440-39-3	Barium		_ -		NR	
	7440-41-7	Beryllium Cadmium		- -		NR NR	
	7440-70-2	Calcium_				NR NR	
	7440-47-3			- -		NR	
	7440-48-4			- -		NR	
	7440-50-8	Copper		-1-		NR	
	7439-89-6	Iron		-1-		NR	
	7439-92-1	Lead				NR	
	7439-95-4	Magnesium				NR	
	7439-96-5	Manganese		_ _		NR	
	7439-97-6	Mercury_	0.10	_ -		CV	
	7440-02-0	Nickel		-1-		NR	
	7440-09-7 7782-49-2	Potassium Selenium		-1-		NR NR	
	7440-22-4			-1-		NR	
	7440-23-5	Sodium		- -		NR	
	7440-28-0			- -		NR	
	7440-62-2	_		-1-		NR	
	7440-66-6	Zinc -		- -		NR	
		Cyanide		- -		NR	
# 1 P - 6	I	اا		!-			
Color Before:			y Before:			Texture:	
Color After:		Clarit	y After:			Artifacts:	
Comments:							
 							•

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1 INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

Lab Name: A	QUATEC		Contract: 9	1082		K40	361R
			O SAS No.			SDG No	.: 42788
	- l/water): FISH					le ID: 2	
·	·	_			-		
Level (low/	med): LOW_	_		Date	e Rec	eived: 0:	3/08/94
% Solids:	100.	0					
	Concentration	77 <u>-</u> -1	/T			. NO /770	
	Concentration	Units (ug	/L or mg/kg dry	y we:	rdut)	: MG/KG	
	CAS No.	Analyte	Concentration	C	Q	M	
	7429-90-5			- -		NR	
	7440-36-0	Antimony_				NR	
	7440-38-2	Arsenic_		_ _		NR	
	7440-39-3	Barium		- -		NR	
	7440-41-7 7440-43-9	Beryllium Cadmium		- -		NR NR	
	7440-70-2	Calcium		- -		NR NR	
	7440-47-3	Chromium		- -		NR	
	7440-48-4			- -		NR	
	7440-50-8	Copper		- -		NR	
	7439-89-6	Iron				NR	
	7439-92-1	Lead				NR	
··	7439-95-4	Magnesium				NR	
	7439-96-5	Manganese		_1_		NR	
	7439-97-6	Mercury	0.06	_ _		CA	
	7440-02-0 7440-09-7	Nickel Potassium		-		NR NR	
	7782-49-2	Selenium		-1-		NR	
		Silver		-	 [NR	
		Sodium		-1-		NR	
	7440-28-0	Thallium				NR	
	7440-62-2	Vanadium_				NR	
	7440-66-6	Zinc		_ _		NR	
		Cyanide		-1-		NR	
	l		/	_!	/		
Color Before	:	Clarit	y Before:			Texture:	
color After:		Clarit	y After:			Artifact	s:
omments:							
							
-							

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INORGANIC ANALYSES DATA SHEET

ab Name: AQU	ATEC		Contract: 9	1082	K40362	F
			O SAS No.			42788
Matrix (soil/					- mple ID: 2134	
Level (low/me		-			- eceived: 03/0	
•		_		Dave No	05/0	U/ J4
% Solids:	100.	0				
C	oncentration	Units (ug	/L or mg/kg dry	y weight	:): MG/KG	
	CAS No.	Analyte	Concentration	C Q	M	
	7429-90-5	Aluminum			$- _{\overline{NR}} $	
	7440-36-0	Antimony_			NR NR	
	7440-38-2	Arsenic			NR	
	7440-39-3	Barium			NR NR	
	7440-41-7 7440-43-9	Beryllium Cadmium			NR NR	
	7440-70-2	Calcium		-	- NR	
	7440-47-3	Chromium		-	- NR	
	7440-48-4	Cobalt		-	- NR	
	7440-50-8	Copper			NR	
	7439-89-6	Iron			NR	
		Lead			NR	
·		Magnesium		_	NR	
	7439-96-5	Manganese		_	NR	
	7439-97-6	Mercury_	0.08	_	CV	
		Nickel Potassium		-	NR NR	
		Selenium		-	$-\frac{NR}{NR}$	
		Silver		-	- NR	
		Sodium			- NR	
		Thallium		-	- NR	
		Vanadium_			NR	
		Zinc			NR	
		Cyanide		_	NR	
				_	_11	
Color Before:		Clarit	y Before:		Texture:	
Color After:		Clarit	y After:		Artifacts:	
Comments:						

INORGANIC ANALYSES DATA SHEET

		Contract: 9	10	82	K40362R
AI_ Ca	ase No.: BI	O SAS No.	: _		SDG No.: 42788
water): FISH	I _		La	ab Samp	le ID: 213402
i): LOW_	_		Da	ate Rec	eived: 03/08/94
100.	0				
ncentration	Units (ug	/L or mg/kg dry	y v	veight):	: MG/KG
CAS No.	Analyte	Concentration	С	Q	м
8400 00 5			_		
			_		NR NR
			-		NR NR
			-		NR
			-		NR
			-		NR
7440-70-2	Calcium				NR
					NR
					NR
			_[NR
			_]	NR
			-1		NR
			-		NR NR
		0.06	-		CV
7440-02-0	Nickel -		-		NR
			-		NR
i e			-1		NR
7440-22-4			-		NR
7440-23-5	Sodium		-		NR
7440-28-0	Thallium		-		NR
7440-62-2	Vanadium_				NR
7440-66-6					NR
	Cyanide		-		NR
	Clarit	y Before:			Texture:
	Clarit	y After:			Artifacts:
	TAS No. TAS	CAS No. Analyte T429-90-5 T440-36-0 T440-39-3 T440-41-7 T440-43-9 T440-50-8 T439-95-4 T439-95-4 T439-95-4 T439-95-4 T439-97-6 T440-02-0 T440-22-4 T440-22-4 T440-23-5 T440-22-4 T440-23-5 T440-22-4 T440-23-5 T440-23-5 T440-28-0 Thallium Tallium T	CAS No.	Nater : FISH_	Lab Samp Date Record Dat

FORM I - IN

1 INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

Lab Name: AQUATEC	c	ontract: 910	82	K40363F				
Lab Code: AQUAI_ C	ase No.: BIO	SAS No.:		SDG No.: 42788_				
Matrix (soil/water): FIS				e ID: 213404				
Level (low/med): LOW		D	ate Rece	ived: 03/08/94				
% Solids: 100	. 0							
Concentration Units (ug/L or mg/kg dry weight): MG/KG								
CAS No.	Analyte Cond	centration C	Q	м				
7429-90-5				VR.				
7440-36-0 7440-38-2	Antimony Arsenic			NR NR				
7440-39-3	Barium		N	VR				
7440-41-7	Beryllium		N	VR				
7440-43-9 7440-70-2	CadmiumCalcium			NR NR				
7440-70-2	Calcium_ Chromium			VR VR				
7440-47-3	Cobalt			NR I				
7440-50-8	Copper		N	1R				
7439-89-6	Iron		N	IR				
7439-92-1	Lead			IR I				
7439-95-4	Magnesium			IR III				
7439-96-5 7439-97-6	Manganese Mercury	0.03		IR CV				
7440-02-0	Nickel -			IR				
7440-09-7	Potassium		N	IR				
7782-49-2	Selenium_			IR				
7440-22-4	Silver			IR				
7440-23-5 7440-28-0	Sodium Thallium			IR IR				
7440-28-0	Vanadium -			IR IR				
7440-66-6	Zinc			IR				
	Cyanide			TR .				
			_	_				
Color Before:	Clarity Be	fore:	_ Т	exture:				
Color After:	Clarity Af	ter:	_ A	rtifacts:				
Comments:								

FORM I - IN

1 EPA SAMPLE NO. INORGANIC ANALYSES DATA SHEET

	AI_ Ca	se No.: BI	Contract: 9 O SAS No.		
Matrix (soil/w	water): FISH			•	SDG No.: 42788
		[•	Lab Samp	ole ID: 213405
evel (low/med	i): LOW_	_		Date Rec	eived: 03/08/94
Solids:	100.	0			
Co	oncentration	Units (ug	/L or mg/kg dr	y weight)	: MG/KG
	CAS No.	Analyte	Concentration	C Q	м
	7429-90-5	Aliminim			NR
	7440-36-0	Antimony_		-	NR
	7440-38-2	Arsenic		-	NR
		Barium		-	NR
		Beryllium			NR
		Cadmium_		_	NR
		Calcium_			NR
	7440-47-3 7440-48-4	Chromium_			NR NR
	T .	Copper			NR NR
		Iron —			NR NR
	7439-92-1	Lead			NR
	,	Magnesium			NR
,	7439-96-5	Manganese			NR
		Mercury	0.01	B	CV
	1	Nickel		_	NR
		Potassium		_	NR
		Selenium_ Silver		-	NR NR
	7440-23-5			-	NR NR
		Thallium		-	NR
		Vanadium-		-	NR
	7440-66-6	Zinc			NR
		Cyanide			NR
olor Before:			y Before:		Texture:
olor After:		Clarit	y After:		Artifacts:
mments:					

FORM I - IN

INORGANIC ANALYSES DATA SHEET

EPA	SAMPLE	NO.
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		INORGANIC	ANALISES DATA	SUEEI		
₩ab Name: AQ	UATEC		Contract: 9	1082	K40364F	
Lab Code: AQUAI_ Case No.: BIO						
Matrix (soil/water): FISH_				Lab Sam	ple ID: 213407	
Level (low/me	ed): LOW			Date Re	ceived: 03/08/94	
% Solids:	100				. ,	
			/L or mg/kg dry	y weight): MG/KG	
	CAS No.	Analyte	Concentration	C Q	M	
	7429-90-5 7440-36-0	Antimony -			NR NR	
	7440-38-2 7440-39-3	Arsenic			NR NR	
	7440-41-7	Beryllium			- NR	
	7440-43-9	Cadmium			NR	
	7440-70-2	Calcium			NR	
	7440-47-3	Chromium_ Cobalt		_ -	NR NR	
	7440-48-4 7440-50-8	Copper			- NR	
	7439-89-6	Iron		- -	NR	
	7439-92-1	Lead		-	NR	
	7439-95-4	Magnesium			NR	
	7439-96-5	Manganese			NR	
		Mercury_	0.05	_	CV	
	7440-02-0	Nickel Potassium		-	NR NR	
		Selenium			NR	
		Silver		-	NR	
	7440-23-5	Sodium			NR	
	•	Thallium_			NR	
	7440-62-2	Vanadium_		_	NR NR	
	7440-66-6	Zinc		-1	NR NR	
		Cyanide		-	- "	
Color Before:		Clarit	y Before:		Texture:	
Color After:		Clarit	y After:		Artifacts:	
Comments:						
Comments:						

FORM I - IN

1 INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

áb Name: AQU	ATEC		Contract: 9	1082	K40364R
	_				SDG No.: 42788
atrix (soil/	water): FISH	<u>. </u>		Lab Sam	ple ID: 213408
evel (low/me	d): LOW_			Date Re	ceived: 03/08/94
Solids:	100.	0			
C	oncentration	Unite (ne	/T or ma/ka dri	. waight	· MC/VC
C	oncentracton	Onics (ug	/L or mg/kg dry	weight,): MG/KG
	CAS No.	Analyte	Concentration	C Q	м
	7429-90-5			-	NR
	7440-36-0	Antimony_			NR
	7440-38-2	Arsenic		_	NR
	7440-39-3 7440-41-7	Barium Beryllium			NR NR
	7440-43-9	Cadmium		-	- NR
	7440-70-2	Calcium		-	NR
	7440-47-3	Chromium		-	NR
	7440-48-4	Cobalt -			NR
	7440-50-8	Copper			NR
	7439-89-6	Iron		_	NR
		Lead		_	NR
		Magnesium Manganese			NR NR
	1	Mercury	0.04	-	- CV
		Nickel -		-	NR
		Potassium		-	NR
		Selenium			NR
		Silver		_	NR
	,	Sodium		_	NR
		Thallium_ Vanadium		_	NR NR
	7440-62-2	Zinc		-	NR
	/440 00 0	Cyanide		-	NR
lor Before:		Clarit	y Before:		Texture:
lor After:		Clarit	y After:		Artifacts:
mments:				_	

FORM I - IN

1 INORGANIC ANALYSES DATA SHEET

EPA	SAMPLE	NO.
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K40369F
SAS No.: SDG No.: 42788 Lab Sample ID: 213410 Date Received: 03/08/94 g/kg dry weight): MG/KG tration C Q M Tration C Q M NR
Lab Sample ID: 213410 Date Received: 03/08/94 g/kg dry weight): MG/KG tration C Q M Tration C Q M NR
g/kg dry weight): MG/KG tration C Q M NR
g/kg dry weight): MG/KG tration C Q M NR
tration C Q M NR
tration C Q M NR
NR NR NR NR NR NR NR NR
NR NR NR NR NR NR NR NR NR
NR NR NR NR NR
NR NR NR
NR NR
NR NR
NR NR
NR NR
NR NR
NR NR
NR
0.28 CV
- NR
NR NR
NR NR
NR NR
NR NR
NR NR
e: Texture:
: Artifacts:

FORM I - IN

1 EPA SAMPLE NO. INORGANIC ANALYSES DATA SHEET

⊶ab Name: A(QUATEC		Contract: 9	1082	K40369R
Lab Code: A(QUAI_ Ca	ase No.: BI	O SAS No.	:	SDG No.: 42788
Matrix (soi	l/water): FISH	I _		Lab Sam	ple ID: 213411
evel (low/m	ned): LOW_	_		Date Re	ceived: 03/08/94
Solids:	100.	0			
	Concentration	Units (ug	/L or mg/kg dry	y weight): MG/KG
	CAS No.	Analyte	Concentration	c Q	M
	l	l	Concentration		
	7429-90-5				
	7440-36-0	Antimony_			NR
	7440-38-2 7440-39-3	Arsenic		-	NR NR
	7440-33-3	Beryllium		-	- NR
	7440-43-9	Cadmium			NR
	7440-70-2	Calcium		_	NR NR
	7440-47-3	Chromium			NR
	7440-48-4	Cobalt			_ NR
	7440-50-8	Copper			NR
	7439-89-6	Iron		_	NR
	7439-92-1	Lead		_	NR
		Magnesium		_	NR NR
		Manganese Mercury	0.19	-	- CV
	7440-02-0	Nickel	0.13		- NR
		Potassium		-	- NR
		Selenium		-	NR
		Silver		-	NR
		Sodium			NR
	7440-28-0	Thallium			- NR
	7440-62-2	Vanadium			NR
	7440-66-6	Zinc -			NR
		Cyanide			NR
	ll			_1	_11
olor Before		Clarit	y Before:		Texture:
olor After:		Clarit	y After:		Artifacts:
mments:					
					
					

FORM I - IN

1 INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

Lab Name: AQUA	TEC		Contract: 9	108	2	K40370F
Lab Code: AQUA	.I Ca	se No.: BI	O SAS No.	:		SDG No.: 42788
Matrix (soil/w Level (low/med	rater): FISH			La	b Samp	le ID: 213413 eived: 03/08/94
% Solids:	100.	0				
Co	ncentration	Units (ug	/L or mg/kg dry	y w	eight)	: MG/KG
	CAS No.	Analyte	Concentration	С	Q	м
•	7429-90-5					NR
	7440-36-0	Antimony_]_].		NR
	7440-38-2 7440-39-3	Arsenic		- -		NR NR
	7440-39-3	Beryllium		- -		NR NR
	7440-43-9	Cadmium		- -		NR
	7440-70-2	Calcium		- -		NR
	7440-47-3	Chromium		- -		NR
	7440-48-4	Cobalt				NR
	7440-50-8	Copper				NR
	7439-89-6	Iron		_ _ _		NR
	7439-92-1	Lead		- -		NR
	7439-95-4 7439-96-5	Magnesium Manganese				NR NR
		Mercury	0.33	- -		CV
		Nickel -		- -		NR
		Potassium		- -		NR
		Selenium		- -		NR
	7440-22-4			- -		NR
		Sodium		- -		NR
		Thallium				NR
		Vanadium_				NR
		Zinc				NR
		Cyanide		- -	 '	NR
Color Before:		Clarit	y Before:	\- 		Texture:
Color After:		Clarit	y After:			Artifacts:
Comments:						

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

Lub Name: AQUA	K40370R								
Lab Code: AQUI	AI_ Ca	se No.: BI	O SAS No.	:	SDG No.: 42788_				
Matrix (soil/	le ID: 213414								
Level (low/med	Date Rec	eived: 03/08/94							
% Solids:	100.	0							
Concentration Units (ug/L or mg/kg dry weight): MG/KG									
	CAS No.	Analyte	Concentration	C Q	м				
	7429-90-5				NR				
	7440-36-0 7440-38-2	Antimony Arsenic		-	NR NR				
	7440-38-2	Barium		-	NR				
	7440-41-7	Beryllium			NR				
	7440-43-9	Cadmium			NR				
	7440-70-2	Calcium_			NR				
	7440-47-3	Chromium_			NR				
	7440-48-4	Cobalt		-	NR NR				
	7440-50-8 7439-89-6	Copper Iron			NR NR				
	7439-93-0	Lead		-	NR				
_	7439-95-4	Magnesium			NR				
	7439-96-5	Manganese			NR				
	7439-97-6	Mercury	0.16		cv				
	7440-02-0	Nickel		_	NR				
	7440-09-7	Potassium		_	NR				
	7782-49-2 7440-22-4	Selenium_ Silver		_	NR NR				
	7440-22-4 7440-23-5	Sodium Sodium		-	NR NR				
	7440-28-0	Thallium		-	NR				
		Vanadium			NR				
	7440-66-6	Zinc			NR				
		Cyanide		_	NR				
	l			_1	ll				
Color Before:		Clarit	y Before:		Texture:				
Color After:		Artifacts:							
Comments:									
									
									

FORM I - IN

MISCELLANEOUS PARAMETERS

MISCELLANEOUS PARAMETERS

		Sex	Fillet Weight	% Lipids		
Sample ID	Description			Fillet	Remaining Carcass	
K40133	Small Mouth Bass	female	341g	3.65	7.53	
K40135	Small Mouth Bass	male	359g	4.26	5.62	
K40136	Small Mouth Bass	male	260g	2.33	9.24	
K40137	Small Mouth Bass	female	273g	2.23	5.38	
K40138	Small Mouth Bass	male	199g	1.66	5.65	
K40140	Small Mouth Bass	female	135g	1.23	5.89	
K40350	Carp	male	484g	1.42	8.69	
K40351	Small Mouth Bass	male	296g	1.00	4.67	
K40352	Small Mouth Bass	male	102g	0.61	2.96	
K40353	Small Mouth Bass	female	141g	1.55	2.77	
K40354	Small Mouth Bass	female	133g	2.36	3.45	
K40359	Carp	female	590g	2.86	5.94	
K40361	Carp	female	707g	11.53	9.53	
K40362	Сагр	female	772g	7.04	8.52	
K40363	Carp	male	786g	2.60	5.63	
K40364	Carp	male	646g	3.95	5.99	
K40369	Small Mouth Bass	male	222g	1.03	1.28	
K40370	Small Mouth Bass	female	202g	0.80	2.56	

DATA REVIEW FOR

ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER SUPERFUND SITE

SDG# 42799

PCB, PESTICIDE AND MERCURY ANALYSES

BIOTA - FISH

Analyses performed by:

Aquatec, Inc. Colchester, Vermont

Review performed by:

Blasland, Bouck & Lee, Inc. Syracuse, New York

Summary

The following is an assessment of the Pesticide/PCB/PBB and Mercury data for SDG# 42799 for the Biota sampling of the Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site. Included with this assessment are the data review check sheets used in the review of the package and sample results. Analyses were performed on the following samples:

					Ana	lysis
Sample ID	Lab ID	Species	Description	Sample Location	Pest/P CB/Hg	%Lipid
K40239F	214493	bass	fillet	Battle Creek	х	х
K40239R	214494	bass	carcass	Battle Creek	х	х
K40240F	213435	bass	fillet	Battle Creek	х	×
K40240R	213436	bass	carcass	Battle Creek	х	х
K40241F	213438	bass	fillet	Battle Creek	х	х
K40241R	213439	bass	carcass	Battle Creek	х	x
K40242F	213441	bass	fillet	Battle Creek	х	x
K40242R	213442	bass	carcass	Battle Creek	х	×
K40244F	214496	bass	fillet	Battle Creek	х	×
K40244R*	214497	bass	carcass	Battle Creek	×	×
K40245F	213444	bass	fillet	Battle Creek	х	x
K40245R	213445	bass	carcass	Battle Creek	x	x
K40304F	213447	bass	fillet	Above Trowbridge Dam	х	×
K40304R	213448	bass	carcass	Above Trowbridge Dam	х	×
K40305F	213450	bass	fillet	Above Trowbridge Dam	х	x
K40305R	213451	bass	carcass	Above Trowbridge Dam	х	x
K40306F	213453	bass	fillet	Above Trowbridge Dam	×	x
K40306R	213454	bass	carcass	Above Trowbridge Dam	x	x
K40308F	213456	bass	fillet	Above Trowbridge Dam	X	x
K40308R	213457	bass	carcass	Above Trowbridge Dam	х	х
K40309F	213459	bass	fillet	Above Trowbridge Dam	x	×
K40309R	213460	bass	carcass	Above Trowbridge Dam	x	Х
K40310F	213462	bass	fillet	Above Trowbridge Dam	x	x
K40310R	213463	bass	carcass	Above Trowbridge Dam	×	X
K40318F	213465	carp	fillet	Trowbridge Dam	x	x
K40318R	213466	carp	carcass	Trowbridge Dam	х	×
K40319F	213468	carp	fillet	Trowbridge Dam	' X	Х
K40319R	213469	carp	carcass	Trowbridge Dam	х	Х

					Ana	lysis
Sample ID	Lab ID	Species	Description	Sample Location	Pest/P CB/Hg	%Lipid
K40320F	213471	carp	fillet	Trowbridge Dam	х	х
K40320R	213472	carp	carcass	Trowbridge Dam	х	×
K40321F	213474	carp	fillet	Trowbridge Dam	х	×
K40321R	213475	carp	carcass	Trowbridge Dam	×	х
K40326F*	213477	carp	fillet	Trowbridge Dam	x	×
K40326R*	213478	carp	carcass	Trowbridge Dam	, x	×
K40327F	213480	carp	fillet	Trowbridge Dam	х	×
K40327R	213481	carp	carcass	Trowbridge Dam	×	×
K40421F	213483	carp	fillet	Ceresco Reservoir	х	х
K40421R	213484	сагр	carcass	Ceresco Reservoir	х	х
K40422F	213486	carp	fillet	Ceresco Reservoir	х	×
K40422R	213487	carp	carcass	Ceresco Reservoir	x	×
K40423F	214490	carp	fillet	Ceresco Reservoir	х	×
K40423R	214491	carp	carcass	Ceresco Reservoir	х	х
K40427F	213489	carp	fillet	Ceresco Reservoir	×	×
K40427R	213490	carp	carcass	Ceresco Reservoir	х	×
K40428F	213492	carp	fillet	Ceresco Reservoir	х	_ X
K40428R	213493	carp	carcass	Ceresco Reservoir	x	X
K40430F	214487	carp	fillet	Ceresco Reservoir	х	×
K40430R	214488	carp	carcass	Ceresco Reservoir	х	×

MS/MSD/DUP performed on sample

PCB ANALYSES

Introduction

Analyses were performed according to the USEPA SW-846 method 8081, modified for PCB only analysis.

The data review process is intended to evaluate the data on a technical basis. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with National Functional Guidelines:

- U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
- J The compound was positively identified; however, the associated numerical value is an estimated concentration only.
- B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.
- N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.
- JN The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.
- E The compound was quantitated above the calibration range.
- D Concentration is based on a diluted sample analysis.
- UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.
- R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant QC problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC test, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

The data presented in the package has been derived using a procedure developed by Aquatec, Inc. in an attempt to improve the analytical process of calibration, identification, and quantitation of PCBs as Aroclors. Key components of this procedure include:

Calibration

The response function of the electron capture detector is inherently non-linear, and while significant linearization is achieved for this detector by electronic means, some non-linearity remains. Power function linearization is used to "straighten the curve" and allow the use of response factors for calibration purposes.

During the initial calibration a response factor is calculated for each peak in the individual Aroclors.

A weighted response factor calculation has been used to adjust for nonlinearity at the low end of the calibration curve.

Identification

Peak retention times are relative. Retention times are in set windows relative to the time markers DCB and TCMX. Time markers adjust for minor variations in column flow or instrument condition and allow the use of very tight windows which minimizes the number of both false positive and false negative peak identifications.

The determination of "which Aroclor or mixture of Aroclors will produce a chromatogram most similar to that of the residue" is made by expressing the unknown sample chromatogram as a linear combination of the Aroclors. The "most similar" Aroclor or mixture of Aroclors is determined by using a least squares minimization of the difference between the unknown chromatogram and the linear combination of Aroclors. This is similar to the procedure presented by L.E. Slivon, P.M. Schumacher and A. Alford-Stevens for the determination of Aroclor composition from GC/MS level of chlorination results.

Identification/quantitation of Aroclors in samples is based on the combined response of two columns, typically RTX-5 and RTX-35. The pooling of response combines the unique qualities of both columns to derive a more defined Aroclor pattern which less likely to be affected by interferents. Identification/quantitation data for the individual columns is provided in the package and can be used as a check on the combined column results.

Data Assessment

1. Holding Time

The specified holding time for PCB analyses from extraction is 40 days. All samples were analyzed within the specified holding time.

2. Blank Contamination

Quality assurance blanks, i.e., method and instrument blanks, are prepared to identify any contamination which may have been introduced into the samples during sample preparation or analysis. Method blanks measure laboratory contamination during preparation. Instrument blanks measure instrument contamination and sample cross-contamination.

No Aroclors were detected in the method or instrument blanks.

3. System Performance

The system performance was acceptable for both columns.

4. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of giving acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument is giving satisfactory daily performance.

4.1 Initial Calibration

The method allows a maximum RSD of 20%. The %RSD was within acceptable limits for all Aroclors.

4.2 Continuing Calibration

A maximum %D of 15 is allowed. All continuing calibrations were within the specified limits with the following exception:

Instrument HP2087 4/21/94 - 15:08

Aroclor 1260 19.0%

All data in the associated samples K40306R, K40308R, K40309R, K40310F, K40310R, K40318F and K40318R have been qualified as estimated.

5. Surrogates / System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique.

Recoveries were below acceptable control limits for both surrogates in samples K40423R, K40244F and K40244R. All data for these samples have been qualified as estimated. Recoveries for both surrogate were above acceptable control limits in sample K40319F. All positive data for this sample have been qualified as estimated. Recoveries were below acceptable control limits for one surrogate in samples K40239F, K40239R, K40244RMSD, K40304F, K40305F, K40306F, K40306R, K40308R, K40309R, K40326FMSD, K40326FMSD, K40326RMS and K40326RMSD, K40423F, K40430F, and K40430R. No qualifiers were added to these samples based on surrogate performance. All other surrogate recoveries were within acceptable control limits.

6. Compound Identification

The determination of Aroclor presence is made by expressing the unknown sample chromatogram as a linear combination of the Aroclors. The most similar Aroclor or mixture of Aroclors is determined by using a least squares minimization of the difference between the unknown chromatogram and the linear combination of Aroclors.

Identification/quantitation of Aroclors is based on the combined response of the RTX-5 and RTX-35 columns. Identification/quantitation data for the individual columns is provided in the package and has been used as a check on the combined column results.

A review of the sample chromatograms indicate that the Aroclors have been correctly identified/quantitated.

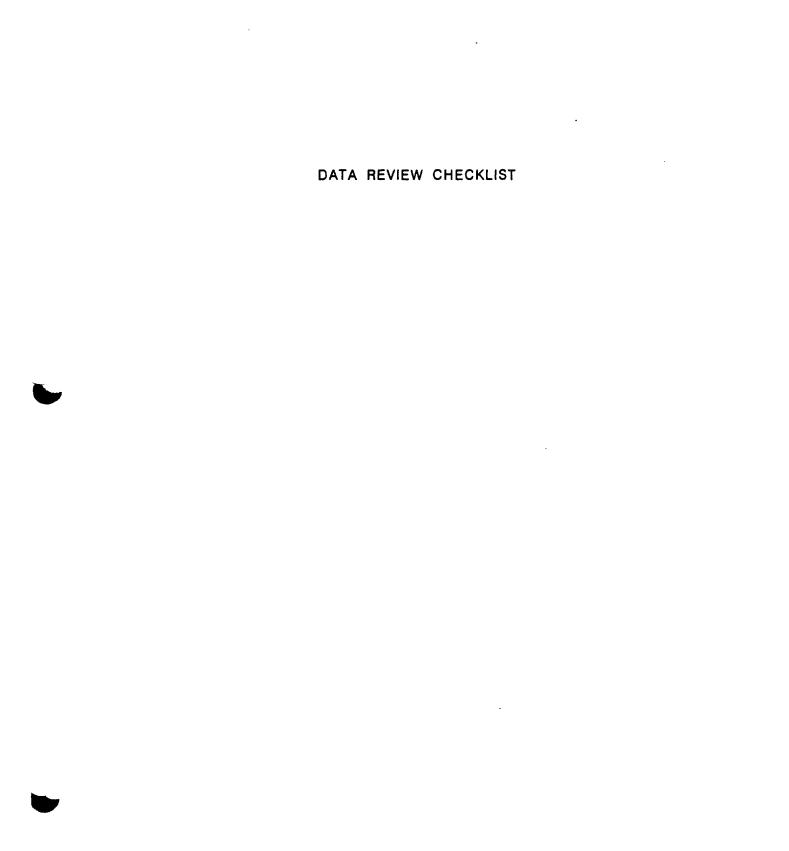
7. Matrix Spike/Matrix Spike Duplicate/Matrix Spike Blank

Matrix spike and matrix spike duplicate data are used to assess the precision and accuracy of the analytical method.

All matrix spike and matrix spike duplicate recoveries were within acceptable control limits. The relative percent difference between recoveries (RPD) were slightly outside acceptable control limits for Aroclor 1254 in samples K40326F and K40326R. No qualifiers have been added to the data based on spike performance.

8. System Performance and Overall Assessment

Overall system performance was acceptable. Other than those deviations specifically mentioned in this review, the overall data quality is within the guidelines listed in the analytical method.



PCB Data Review Checklist

	YES	NO	NA
Data Completeness and Deliverables			_
Is there a narrative or cover letter present?	X		
Are the samples numbers included in the narrative?	X		
Are the sample chain-of-custodies present?	X		
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?		X	
Holding Times			
Have any holding times been exceeded?		X	
Surrogate Recovery			
Are surrogate recovery forms present?	x		
Are all the samples listed on the appropriate surrogate recovery form?	X		
Are the outliers correctly marked with an asterisk?	X		
Were recoveries of TCMX or DCB outside of specified limits for any sample or blank?	X		
If yes, were the samples reanalyzed?		×	
Matrix Spikes			
Is there a matrix spike recovery form present?		X	
Were matrix spikes analyzed at the required frequency?			X
How many spike recoveries were outside of QC limits?		·	
How many RPDs for matrix spike and matrix spike duplicate were outside of QC limits?			
2_ out of6			
Blanks		•	
ls a Method Blank Summary Form present?	<u> </u>		
Has a method blank been analyzed for each set of samples or for each 20 samples, whichever is more frequent?	X		
Has an instrument blank been analyzed at the beginning of each 12 hour period following the initial calibration?	x		

PCB Data Review Checklist - Page 2

	YES	NO	NA
Is the chromatographic performance acceptable for each instrument?	X		
Do any method/reagent/instrument blanks have positive results?		X	
Do any field/rinse blanks have positive results?			X
Are there field/rinse/equipment blanks associated with every sample?		x	
Calibration and GC Performance			
Are the following chromatograms and data printouts present?			
Aroclor 1016/1260	<u> </u>		
Aroclor 1221	X		
Aroclor 1232	X		
Aroclor 1242	<u> </u>		
Aroclor 1248	<u> x</u>		
Aroclor 1254	X		
Instrument Blanks	X		
Are Initial Calibration Summary Forms present and complete for each column and analytical sequence?	x		
Are the linearity criteria for the initial analyses within limits for both columns (20% RSD)	x		
Have all samples been injected within a 12 hour period beginning with the injection of an instrument blank?	X		
Is a Calibration Verification Summary Form present and complete for each continuing standard analyzed?			
Are %D values for all compounds within limits (less than 15%)?		X	
Analytical Sequence Check			
Is a analytical sequence form present and complete for each column and each period of analyses?	X		
Was the proper analytical sequence followed?	X		

PCB Data Review Checklist - Page 3

	YES	NO	NA
Cleanup Efficiency Verification			
If GPC cleanup was performed, is Gel Permeation Chromatography Check Form present?	X		
Are percent recoveries of the compounds used to check the efficiency of the cleanup procedure within QC limits?	x		
PCB Identification			
ls both a combined and single column Aroclor Identification Report present for every sample?	X		
Do the combined column and individual column Aroclor identifications agree?	X		
Were there any false negatives?		X	
Was GC/MS confirmation provided when required?			×
Compound Quantitation and Reported Detection Lin	nits		
Are the reporting limits adjusted to reflect sample dilutions, and for soils, sample moisture?	x		
Chromatogram Quality			
Were the baselines stable?	X		
Were any electronegative displacement (negative peaks) or unusual peaks detected?		X	
Field Duplicates			
Where field duplicates submitted with the samples?		X	

PCB Holding Time and Surrogate Recovery Summary

Sample ID	Holding	Surrogates	- Column 1	Surrogates	- Column 2
	Time	тех	DCB	TCX	DCB
K40239F	OK for all	↓ (57)		↓ (55)	
K40239R	samples	↓ (54)		↓ (52)	
K40240F					
K40240R				·	
K40241F					
K40241R					
K40242F					
K40242R					<u> </u>
K40244F		↓ (49)	↓ (57)	↓ (47)	Į (58)
K40244R		Į (31)	† (38)	↓ (30)	† (38)
K40244RMS		Į (54)			
K40244RMSD		ļ (43)		↓ (49)	
K40245F					
K40245R					
K40304F		↓ (57)		↓ (57)	
K40304R		↓ (58)			
K40305F		↓ (59)		↓ (59)	
K40305R					
K40306F		↓ (50)		↓ (50)	
K40306R		↓ (55)			
K40308F					
K40308R		↓ (57)			
K40309F					
K40309R		↓ (58)			
K40310F					
K40310R					
K40318F					-
K40318R					
K40319F		† (176)	† (179)	† (217)	† (219)
K40319R					
K40320F					
K40320R					

				,,	
K40321F			<u> </u>	<u> </u>	
K40321R					
K40326F			<u> </u>		
K40326FMS		↓ (58)			
K40326FMSD		↓ (55)			
K40326R					
K40326RMS		↓ (55)			
K40326RMSD		↓ (55)			
K40327F					
K40327R					
K40421F					
K40421R					
K40422F					
K40422R					
K40423F		↓ (52)		↓ (51)	
K40423R		↓ (51)	Į (58)	↓ (49)	
K40427F					
K40427R					
K40428F					
K40428R					
K40430F		↓ (57)		↓ (55)	
K40430R		↓ (54)		↓ (52)	·

Surrogate Standards TCX Tetrachloro-m-xylene DCB Decachlorobiphenyl

Qualifiers:

Surrogates diluted out Recovery high Recovery low D

Unless otherwise noted, all parameters are within specified limits.

PCB Calibration Summary

Instrument: HP2087 Column: RTX-35 / RTX-5

Date:	4/19/94 1356	4/20	4/20	4/20	4/20	4/21	4/21
Time:	to 4/20/94 1016	1510	1546	2257	2332	0644	0720
	Initial Cal.	Cont. Cal	Cent. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont Cal.
	%ASD	% D	% D	%D	%D	% D	% D
Aroclor 1016	4.3 / 4.2		2.5				
Aroclor 1221	3.5 / 5.0						
Aroclor 1232	4.0 / 4.5						
Aroclor 1242	4.7 / 5.4				4.0		
Aroclor 1248	3.5 / 3.5	2.0		4.0		5.0	
Aroclor 1254	3.1 / 2.9						6.5
Aroclor 1260	2.7 / 2.3		· · · · · · · · · · · · · · · · · · ·				
Tetrachioro-m-xylene	7.5 / 6.7			. <u> </u>			
Decachlorobiphenyl	8.6 / 9.5						
ffected Samples:							
							<u>.</u>
Ţ							

Date:		4/21	4/21				
Time:		1432	1508				
	initial Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.
	%RSD	%D	%D	% D	% D	% D	% D
Aroclor 1016							
Aroclor 1221							
Aroclor 1232							
Aroclor 1242							
Arocior 1248		9.0					
Aroclor 1254					_		
Aroclor 1260			19.0				
Tetrachioro-m-xylene				<u> </u>			
Decachlorobiphenyl				<u> </u>			
ffected Samples:			K40306R				
			K40308R				
			K40309R				
			K40310F				
			K40310R				
<u> </u>			K40318F				
			K40318R				
<u> </u>							
<u> </u>							
L							

Date:	4/22/94 1932	4/27	4/27	4/27	4/27	4/28	4/28
Time:	lo 4/23/94 1455	0939	1013	1935	2009	0300	0335
	initial Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal
	%RSD	% D	% D	%D	% D	% D	%D
Arocior 1016	3.5 / 3.5		4.5				
Aroclor 1221	8.2 / 6.0						
Aroclor 1232	2.9 / 3.1						
Aroclor 1242	3.3 / 3.7				1.5	-	
Arocior 1248	3.6 / 2.8	7.5		5.0		1.0	
Aroclor 1254	3.6 / 3.4						2.0
Aroclor 1260	3.2 / 3.1						
Tetrachloro-m-xylene	6.2 / 3.3						
Decachlorobiphenyl	9.1 / 9.2						
Affected Samples:				·			
		-					
}							
Ì							

Date:		4/28	4/28		<u> </u>		
Time:		0843	0917				
	initial Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.
	%RSD	% D	%D	%D	. %0	% D	% D
Arocior 1016							
Aroclor 1221							
Aroclor 1232							
Arocior 1242							
Aroclor 1248		1.0					
Aroclor 1254							
Aroclor 1260			1.5				
Tetrachioro-m-xylene							
Decachlorobiphenyl							
ffected Samples:							
						·	
ļ							
							

Date:	4/30/94 0543	5/2	5/2	5/2	5/2	5/2	5/2
Time:	la 5/1/94 0106	0357	0431	1123	1157	1632	1706
	initial Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cel.	Cont. Cal.	Cont Cal.
	% RSD	%D	%D	% D	% D	% D	% D
Arocior 1016	4.2 / 4.4		12.5				
Aroclor 1221	5.1 / 6.9						
Arocior 1232	4.2 / 3.1						
Aroclor 1242	3.1 / 3.4				0.5		
Aroclor 1248	3.4 / 3.0	1.0		1.0		1.5	
Aroclor 1254	3.1 / 3.6						6.0
Arocior 1260	3.8 / 3.4				·		
Tetrachloro-m-xylene	5.2 / 6.4						
Decachiorobiphenyl	7.9 / 8.1						
iffected Samples:							
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		l					
					}		

Date:		5/3	5/3	5/3	5/3	5/5	5/5
Time:		1342	1418	2109	2143	0250	0324
	initial Cal.	Cont. Cal.	Cont. Cal.	Cont. Çal.	Cont. Cal.	Cont. Cal.	Cont Cal.
	%ASD	% D	% D	%D	%D	% D	% D
Arocior 1016							
Aroclor 1221	•						
Aroclor 1232							
Aroclor 1242			1.5				
Arocior 1248		3.0		4.0		2.0	
Aroclor 1254		<u>-</u>			7.5		5.0
Arocior 1260							
Tetrachioro-m-xylene							
Decachlorobiphenyl							_
Affected Samples:							
	<u></u>						

Date:		5/5	5/5				
Time;		1014	1048				
	Initial Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.
	%RSD	%D	%D	%D	% D	% D	% D
Aroclor 1016							ļ <u></u>
Aroclor 1221							
Aroclor 1232							
Arocior 1242							
Aroclor 1248		1.0					
Aroclor 1254				Ĺ			
Arocior 1260			1.0				
Tetrachioro-m-xylene			[
Decachlorobiphenyl							
Affected Samples:							
<u>[</u>							
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CORRECTED ANALYSIS SUMMARY FORMS

EPA SAMPLE NO.

K40239F Lab Name: Aquatec, Inc. Lab Code: AQUAI

91082 Case: BIO 42799 Contract: SDG:

Phase Type: **BIOTA** Lab Sample ID: 214493 10.0 Phase Weight: Date Received: (g) 03/20/94 Injection Volume: 1.0 (uL) Date Extracted: 03/25/94

1.0 04/28/94 Dilution Factor: Date Analyzed:

Sulfur Clean-up: Ν (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	
12674-11-2	Aroclor-1016	0.050	ι
11104-28-2	Arocior-1221	0.050	L
11141-16-5	Aroclor-1232	0.050	Ĺ
53469-21-9	Aroclor-1242	0.050	Ų
12672-29-6	Arocior-1248	0.050	_ l
11097-69-1	Aroclor-1254	0.062	
11096-82-5	Aroclor-1260	0.022	J

EPA SAMPLE NO. K40239R Lab Name: Aquatec, Inc. Lab Code: AQUAI 91082 Contract: Case: BIO SDG: 42799 Phase Type: **BIOTA** Lab Sample ID: 214494 10.0 Phase Weight: **(g)** Date Received: 03/20/94 1.0 Injection Volume: (uL) 03/25/94 Date Extracted: Dilution Factor: 1.0 04/28/94 Date Analyzed: Sulfur Clean-up: N (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	<u>a</u>
12674-11-2	Aroclor-1016	0.050	υ
11104-28-2	Aroclor-1221	0.050	U
11141-16-5	Aroclor-1232	0.050	U
53469-21-9	Aroclor-1242	0.050	U
12672-29-6	Aroclor-1248	0.050	U
11097-69-1	Aroclor-1254	0.14	
11096-82-5	Aroclor-1260	0.067	

K40240F

Lab Code: AQUAI

Case: BIO SDG: 42799

Phase Type: **BIOTA** Lab Sample ID: 213435 10.0 Phase Weight: (g) Date Received: 03/09/94 1.0 Date Extracted: Injection Volume: (uL) 03/23/94 1.0 Dilution Factor: Date Analyzed: 04/20/94

Lab Name: Aquatec, inc.

Contract:

91082

Sulfur Clean-up: N (Y/N)

EPA SAMPLE NO.

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	0
12674-11-2	Arocior-1016	0.050	U
11104-28-2	Aroclor-1221	0.050	U
11141-16-5	Aroclor-1232	0.050	U
53469-21-9	Aroclor-1242	0.050	U
12672-29-6	Aroclor-1248	0.050	U
11097-69-1	Aroclor-1254	0.20	
11096-82-5	Aroclor-1260	0.062	

EPA SAMPLE NO. K40240R Lab Code: AQUAI Lab Name: Aquatec, Inc. Contract: 91082 BIO 42799 Case: SDG: BIOTA Phase Type: Lab Sample ID: 213436 Phase Weight: 10.0 Date Received: 03/09/94 **(g)** Injection Volume: 1.0 (uL) Date Extracted: 03/23/94 Dilution Factor: 1.0 04/20/94 Date Analyzed: Sulfur Clean-up: (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	
12674-11-2	Aroclor-1016	0.050	
11104-28-2	Arocior-1221	0.050	
11141-16-5	Aroclor-1232	0.050	
53469-21-9	Aroclor-1242	0.050	
12672-29-6	Aroclor-1248	0.050	
11097-69-1	Aroclor-1254	0.45	
11096-82-5	Aroclor-1260	0.13	

EPA SAMPLE NO. K40241F Lab Name: Aquatec, Inc. Lab Code: AQUAI Contract: 91082 Case: BIO SDG: 42799 Phase Type: **BIOTA** Lab Sample ID: 213438 Phase Weight: 10.0 Date Received: 03/09/94 **(g)** 1.0 03/23/94 Injection Volume: (uL) Date Extracted: Dilution Factor: 1.0 Date Analyzed: 04/20/94 Sulfur Clean-up: (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	C
12674-11-2	Arocior-1016	0.050	_ (
11104-28-2	Aroclor-1221	0.050	l
11141-16-5	Aroclor-1232	0.050	ι
53469-21-9	Aroclor-1242	0.050	L
12672-29-6	Aroclor-1248	0.050	Ų
11097-69-1	Aroclor-1254	0.24	
11096-82-5	Aroclor-1260	0.069	

EPA SAMPLE NO. K40241R Lab Name: Aquatec, Inc. Lab Code: AQUAI 91082 Contract: Case: BIO SDG: 42799 Phase Type: **BIOTA** Lab Sample ID: _ 213439 10.0 Date Received: 03/09/94 Phase Weight: (g) Injection Volume: 1.0 (uL) Date Extracted: 03/23/94 Dilution Factor: ___ 1.0 Date Analyzed: 04/20/94 Sulfur Clean-up: N (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	
12674-11-2	Aroclor-1016	0.050	U
11104-28-2	Aroclor-1221	0.050	l
11141-16-5	Aroclor-1232	0.050	L
53469-21-9	Aroclor-1242	0.050	U
12672-29-6	Aroclor-1248	0.050	U
11097-69-1	Aroclor-1254	0.53	
11096-82-5	Aroclor-1260	0.14	

EPA SAMPLE NO. K40242F Lab Code: Lab Name: Aquatec, Inc. AQUAI Case: _ 42799 91082 Contract: BIO SDG: **BIOTA** Lab Sample ID: 213441 Phase Type: Phase Weight: 10.0 Date Received: 03/09/94 (g) Injection Volume: 1.0 Date Extracted: (uL) 03/23/94 Dilution Factor: 1.0 Date Analyzed: 04/20/94 Sulfur Clean-up: _ (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	0
12674-11-2	Aroclor-1016	0.050	U
11104-28-2	Aroclor-1221	0.050	U
11141-16-5	Aroclor-1232	0.050	_ \
53469-21-9	Aroclor-1242	0.050	L
12672-29-6	Aroclor-1248	0.050	U
11097-69-1	Aroclor-1254	0.062	
11096-82-5	Aroclor-1260	0.031	J

EPA SAMPLE NO. K40242R Lab Code: AQUAI Lab Name: Aquatec, Inc. Case: BIO SDG: 42799 91082 Contract: Lab Sample ID: 213442 **BIOTA** Phase Type: Date Received: 03/09/94 Phase Weight: 10.0 (g) 03/23/94 Injection Volume: 1.0 (uL) Date Extracted: 04/21/94 1.0 Date Analyzed: Dilution Factor: Sulfur Clean-up: N (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	0
12674-11-2	Aroclor-1016	0.050	U
11104-28-2	Arocior-1221	0.050	U
11141-16-5	Arocior-1232	0.050	U
53469-21-9	Aroclor-1242	0.050	U
12672-29-6	Aroclor-1248	0.050	U
11097-69-1	Aroclor-1254	0.25	
11096-82-5	Aroclor-1260	0.13	

EPA SAMPLE NO.

K40244F Lab Code: Lab Name: Aquatec, Inc. AQUAL Case: ___ Contract: _ 91082 BIO SDG: 42799 Phase Type: **BIOTA** Lab Sample ID: 214496 Phase Weight: 10.0 Date Received: 03/20/94 **(g)** (uL) Injection Volume: _ 1.0 Date Extracted: 03/25/94 04/28/94 Dilution Factor: 1.0 Date Analyzed: Sulfur Clean-up: Ν (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	0
12674-11-2	Aroclor-1016	0.050	U
11104-28-2	Aroclor-1221	0.050	U
11141-16-5	Aroclor-1232	0.050	U
53469-21-9	Aroclor-1242	0.050	U
12672-29-6	Aroclor-1248	0.050	U
11097-69-1	Aroclor-1254	0.11	
11096-82-5	Aroclor-1260	0.037	J

EPA SAMPLE NO.

 Lab Name:
 Aquatec, Inc.
 Lab Code:
 AQUAI

 Contract:
 91082
 Case:
 BIO
 SDG:
 42799

Phase Type: __ **BIOTA** Lab Sample ID: 214497 10.0 Phase Weight: (g) Date Received: 03/20/94 Injection Volume: __ 1.0 (uL) Date Extracted: 03/25/94 Dilution Factor: ___ 1.0 Date Analyzed: 04/28/94

Sulfur Clean-up: N (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	Q
12674-11-2	Arocior-1016	0.050	U
11104-28-2	Arocior-1221	0.050	U`.
11141-16-5	Aroclor-1232	0.050	U:
53469-21-9	Aroclor-1242	0.050	U`
12672-29-6	Aroclor-1248	0.050	U
11097-69-1	Aroclor-1254	0.19	
11096-82-5	Aroclor-1260	0.082	

EPA SAMPLE NO.

K40245F Lab Name: Aquatec, Inc. Lab Code: _ AQUAI Contract: 91082 Case: BIO SDG: 42799 **BIOTA** Phase Type: Lab Sample ID: 213444 Phase Weight: 10.0 (g) Date Received: 03/09/94 Injection Volume: (uL) 1.0 Date Extracted: 03/23/94 Dilution Factor: ___ 1.0 Date Analyzed: 04/21/94 Sulfur Clean-up: (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	c
12674-11-2	Aroclor-1016	0.050	_ ι
11104-28-2	Aroclor-1221	0.050	l
11141-16-5	Aroclor-1232	0.050	L
53469-21-9	Aroclor-1242	0.050	
12672-29-6	Aroclor-1248	0.050	Ĺ
11097-69-1	Aroclor-1254	0.069	
11096-82-5	Aroclor-1260	0.029	J

EPA SAMPLE NO. K40245R Lab Code: Lab Name: Aquatec, Inc. AQUAI BIO SDG: _ Contract: 91082 Case: 42799 Phase Type: **BIOTA** Lab Sample ID: 213445 Phase Weight: _ 10.0 **(g)** Date Received: 03/09/94 Injection Volume: 1.0 (uL) Date Extracted: 03/23/94 Dilution Factor: 1.0 Date Analyzed: 04/21/94 Sulfur Clean-up:

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	
12674-11-2	Aroclor-1016	0.050	U
11104-28-2	Arocior-1221	0.050	U
11141-16-5	Aroclor-1232	0.050	l
53469-21-9	Arocior-1242	0.050	ι
12672-29-6	Aroclor-1248	0.050	ι
11097-69-1	Aroclor-1254	0.30	
11096-82-5	Aroclor-1260	0.14	

(Y/N)

EPA SAMPLE NO.

Lab Code: AQUAI K40304F

Contract: 91082 Case: BIO SDG: 42799

Phase Type: BIOTA Lab Sample ID: 213447

Phase Weight: 10.0 (g) Date Received: 03/09/94

Lab Name: Aquatec, Inc.

Injection Volume: 1.0 (uL) Date Extracted: 03/23/94

 Dilution Factor:
 5.0
 Date Analyzed:
 04/21/94

 Sulfur Clean-up:
 N
 (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	
12674-11-2	Aroclor-1016	0.25	_ U
11104-28-2	Aroclor-1221	0.25	U
11141-16-5	Aroclor-1232	0.25	U
53469-21-9	Aroclor-1242	0.25	Ú
12672-29-6	Aroclor-1248	0.25	U
11097-69-1	Aroclor-1254	1.3	
11096-82-5	Aroclor-1260	0.21	J

EPA SAMPLE NO. K40304R Lab Name: Aquatec, Inc. Lab Code: AQUAI BIO SDG: 42799 Contract: 91082 Case: **BIOTA** Lab Sample ID: 213448 Phase Type: Phase Weight: 10.0 (g) Date Received: 03/09/94 Injection Volume: 1.0 (uL) Date Extracted: 03/23/94 30.0 Date Analyzed: 04/21/94 Dilution Factor:

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	
12674-11-2	Aroclor-1016	1.5	ι
11104-28-2	Aroclor-1221	1.5	l
11141-16-5	Aroclor-1232	1.5	·
53469-21-9	Aroclor-1242	1.5	ŧ
12672-29-6	Arocior-1248	1.5	l
11097-69-1	Aroclor-1254	11	
11096-82-5	Aroclor-1260	2.2	

Sulfur Clean-up:

(Y/N)

EPA SAMPLE NO. K40305F Lab Code: Lab Name: Aquatec, Inc. AQUAI SDG: ____ 91082 BIO 42799 Contract: _ Case: Lab Sample ID: 213450 Phase Type: **BIOTA** Phase Weight: 10.0 Date Received: (0) 03/09/94 Injection Volume: _ 1.0 (uL) Date Extracted: 03/23/94 Dilution Factor: 5.0 Date Analyzed: 05/02/94 Sulfur Clean-up: N (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	
12674-11-2	Aroclor-1016	0.25	_ (
11104-28-2	Arocior-1221	0.25	Ĺ
11141-16-5	Aroclor-1232	0.25	_ \
53469-21-9	Aroclor-1242	0.25	_ (
12672-29-6	Aroclor-1248	2.1	
11097-69-1	Aroclor-1254	1.6	
11096-82-5	Aroclor-1260	0.49	

EPA SAMPLE NO. K40305R Lab Name: Aquatec, inc. Lab Code: AQUAI BIO SDG: 42799 Case: 91082 Contract: Lab Sample ID: 213451 **BIOTA** Phase Type: __ Date Received: 03/09/94 Phase Weight: __ 10.0 **(g)** Date Extracted: 03/23/94 1.0 (uL) Injection Volume: __ Date Analyzed: 04/21/94 Dilution Factor: ___ 15.0 Sulfur Clean-up: _____N (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	a
12674-11-2	Aroclor-1016	0.75	U
11104-28-2	Aroclor-1221	0.75	U
11141-16-5	Aroclor-1232	0.75	U
53469-21-9	Aroclor-1242	0.75	U
12672-29-6	Aroclor-1248	2.8	
11097-69-1	Aroclor-1254	3.4	
11096-82-5	Aroclor-1260	0.97	
11030-02-3	A100101 1200		

EPA SAMPLE NO. K40306F Lab Name: Aquatec, Inc. Lab Code: AQUAI 42799 91082 Case: BIO Contract: SDG: ___ Phase Type: **BIOTA** Lab Sample ID: 213453 10.0 Phase Weight: (g) Date Received: 03/09/94 Injection Volume: 1.0 (uL) Date Extracted: 03/23/94 Dilution Factor: 2.0 Date Analyzed: 05/02/94 Sulfur Clean-up: (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	
12674-11-2	Aroclor-1016	0.10	
11104-28-2	Aroclor-1221	0.10	
11141-16-5	Aroclor-1232	0.10	
53469-21-9	Aroclor-1242	0.10	
12672-29-6	Aroclor-1248	0.10	
11097-69-1	Aroclor-1254	1.1	
11096-82-5	Aroclor-1260	0.45	

EPA SAMPLE NO.

 Phase Type:
 BIOTA
 Lab Sample ID:
 213454

 Phase Weight:
 10.0
 (g)
 Date Received:
 03/09/94

 Injection Volume:
 1.0
 (uL)
 Date Extracted:
 03/23/94

 Dilution Factor:
 20.0
 Date Analyzed:
 04/21/94

Sulfur Clean-up: N (Y/N)

COMPOUND	CONCENTRATION (mg/Kg)	Q
Aroclor-1016	1.0	しコ
Aroclor-1221	1.0	リア
Aroclor-1232	1.0	n.1
Aroclor-1242	1.0	U:T
Aroclor-1248	1.0	U.T
Aroclor-1254	9.0	ブ
Aroclor-1260	4.1	उ
	Aroclor-1016 Aroclor-1221 Aroclor-1232 Aroclor-1242 Aroclor-1248 Aroclor-1254	Aroclor-1016 1.0 Aroclor-1221 1.0 Aroclor-1232 1.0 Aroclor-1242 1.0 Aroclor-1248 1.0 Aroclor-1254 9.0

EPA SAMPLE NO.

K40308F Lab Name: Aquatec, Inc. Lab Code: _ AQUAI 91082 BIO SDG: Contract: Case: _ 42799 Phase Type: **BIOTA** Lab Sample ID: 213456 10.0 Phase Weight: ___ (g) Date Received: 03/09/94 Injection Volume: 1.0 (uL) Date Extracted: 03/23/94 Dilution Factor: ___ 5.0 Date Analyzed: 05/02/94 Sulfur Clean-up: (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	
12674-11-2	Aroclor-1016	0.63	
11104-28-2	Aroclor-1221	0.25	·
11141-16-5	Aroclor-1232	0.25	l
53469-21-9	Aroclor-1242	0.25	U
12672-29-6	Aroclor-1248	0.25	L
11097-69-1	Aroclor-1254	1.9	
11096-82-5	Arocior-1260	0.22	J

EPA SAMPLE NO. K40308R AQUAI Lab Name: Aquatec, Inc. Lab Code: 91082 Case: _ BIO SDG: Contract: 42799 **BIOTA** Lab Sample ID: 213457 Phase Type: 10.0 Phase Weight: ___ (g) Date Received: 03/09/94 Date Extracted: Injection Volume: __ 1.0 (uL) 03/23/94 Dilution Factor: 15.0 Date Analyzed: 04/21/94 Sulfur Clean-up: (Y/N)

COMPOUND	CONCENTRATION (mg/Kg)	Q
Aroclor-1016	0.75	UJ
Aroclor-1221	0.75	U
Aroclor-1232	0.75	<u></u>
Aroclor-1242	0.75	U,J
Aroclor-1248	2.2	7
Aroclor-1254	4.0	J
Aroclor-1260	0.80	
	Aroclor-1016 Aroclor-1221 Aroclor-1232 Aroclor-1242 Aroclor-1248 Aroclor-1254	Aroclor-1016 0.75 Aroclor-1221 0.75 Aroclor-1232 0.75 Aroclor-1242 0.75 Aroclor-1248 2.2 Aroclor-1254 4.0

EPA SAMPLE NO.

K40309F

Lab Name: Aquatec, Inc.

Lab Code: _ AQUAI

91082 Contract:

BIO Case:

SDG: 42799

213459

BIOTA Phase Type: Phase Weight: 10.0 (0) Injection Volume: 1.0 (uL) 5.0

Dilution Factor: _

Date Received: 03/09/94

Lab Sample ID:

Date Extracted: 03/23/94 Date Analyzed: 05/02/94

Sulfur Clean-up: Ν (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	
12674-11-2	Aroclor-1016	0.25	L
11104-28-2	Aroclor-1221	0.25	ī
11141-16-5	Aroclor-1232	0.25	l
53469-21-9	Aroclor-1242	0.25	ι
12672-29-6	Aroclor-1248	0.25	ι
11097-69-1	Aroclor-1254	1.3	
11096-82-5	Aroclor-1260	0.28	

EPA SAMPLE NO.

(Y/N)

Sulfur Clean-up: N

K40309R Lab Name: Aquatec, Inc. Lab Code: AQUAI 91082 BIO Contract: Case: SDG: 42799 **BIOTA** Lab Sample ID: Phase Type: 213460 Phase Weight: _ 10.0 (g) Date Received: 03/09/94 Date Extracted: Injection Volume: 1.0 (uL) 03/23/94 30.0 Date Analyzed: 04/21/94 Dilution Factor:

> CAS NO. COMPOUND CONCENTRATION (mg/Kg) Q_ UI 12674-11-2 Aroclor-1016 1.5 11104-28-2 Aroclor-1221 1.5 U T Aroclor-1232 11141-16-5 1.5 ロゴ 53469-21-9 Aroclor-1242 1.5 UJ 12672-29-6 Aroclor-1248 1.5 UI 11097-69-1 Aroclor-1254 8.0 J 11096-82-5 Aroclor-1260 1.8

EPA SAMPLE NO.

K40310F Lab Name: Aquatec, Inc. Lab Code: AQUAI 91082 Case: BIO SDG: 42799 Contract: Lab Sample ID: Phase Type: **BIOTA** 213462 Phase Weight: 10.0 (g) Date Received: 03/09/94 Injection Volume: __ (uL) Date Extracted: 1.0 03/23/94 5.0 Date Analyzed: 04/21/94 Dilution Factor: ___ Sulfur Clean-up: (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	<u>a</u>
12674-11-2	Arocior-1016	0.72	
11104-28-2	Aroclor-1221	0.25	UĘ
11141-16-5 Aroclor-1232	Aroclor-1232	0.25	υŢ
53469-21-9	Arocior-1242	0.25	U
12672-29-6	Aroclor-1248	0.25	U:
11097-69-1	Aroclor-1254	1.3	-
11096-82-5	Aroclor-1260	0.15	J

EPA SAMPLE NO. K40310R Lab Name: Aquatec, Inc. Lab Code: __ AQUAI Contract: __ 91082 Case: __ BIO SDG: _ 42799 **BIOTA** Lab Sample ID: _ 213463 Phase Type: _ Phase Weight: _ 10.0 Date Received: 03/09/94 (g) 1.0 (uL) Date Extracted: 03/23/94 Injection Volume: _ 15.0 Dilution Factor: _ Date Analyzed: 04/21/94

<u> </u>	CONCENTRATION (mg/Kg)	COMPOUND	CAS NO.
3	3.4	Arocior-1016	12674-11-2
0.5	0.75	Aroclor-1221	11104-28-2
UJ	0.75	Aroclor-1232	11141-16-5
UJ	0.75	Aroclor-1242	53469-21-9
UJ	0.75	Aroclor-1248	12672-29-6
5	6.4	Arocior-1254	11097-69-1
J	0.64	Aroclor-1260	11096-82-5
64	0.	Aroclor-1260	11096-82-5

Sulfur Clean-up:

(Y/N)

EPA SAMPLE NO.

K40318F

Lab Code: AQUAI

Case: BIO SDG: 42799

Lab Sample ID: 213465
Date Received: 03/09/94

 Phase Weight:
 10.0
 (g)
 Date Received:
 03/09/94

 Injection Volume:
 1.0
 (uL)
 Date Extracted:
 03/23/94

 Dilution Factor:
 15.0
 Date Analyzed:
 04/21/94

Lab Name: Aquatec, Inc.

Contract:

Phase Type:

91082

BIOTA

Sulfur Clean-up: N (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	a
12674-11-2	Aroclor-1016	0.75	U.J
11104-28-2	Aroclor-1221	0.75	UJ
11141-16-5	Aroclor-1232	0.75	η <u></u>
53469-21-9	Aroclor-1242	0.75	U:7
12672-29-6	Aroclor-1248	0.75	U.J
11097-69-1	Aroclor-1254	4.5	J
11096-82-5	Aroclor-1260	1.2	ゴ

EPA SAMPLE NO.

K40318R Lab Name: Aquatec, Inc. Lab Code: AQUAI 91082 Case: ___ Contract: BIO SDG: 42799 **BIOTA** Phase Type: Lab Sample ID: 213466 10.0 Date Received: Phase Weight: ___ (g) 03/09/94 Injection Volume: __ 1.0 (uL) Date Extracted: 03/23/94

Dilution Factor:

10.0

Date Analyzed: 04/21/94
Sulfur Clean-up: N (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	a
12674-11-2	Aroclor-1016	0.50	UT
11104-28-2	Aroclor-1221	0.50	UJ
11141-16-5	Aroclor-1232	0.50	U.J
53469-21-9	Arocior-1242	0.50	UT
12672-29-6	Aroclor-1248	0.50	U.J
11097-69-1	Aroclor-1254	3.9	J
11096-82-5	Aroclor-1260	1.1	

EPA SAMPLE NO.

03/23/94

K40319F Lab Name: Aquatec, Inc. Lab Code: AQUAI Contract: 91082 Case: BIO SDG: 42799 Phase Type: **BIOTA** Lab Sample ID: 213468 Phase Weight: 10.0 Date Received: 03/09/94 **(g)**

Date Extracted:

Dilution Factor: 5.0 Date Analyzed: 05/02/94 Sulfur Clean-up: N (Y/N)

Injection Volume:

1.0

(uL)

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	a
12674-11-2	Aroclor-1016	0.25	U
11104-28-2	Aroclor-1221	0.25	U
11141-16-5	Aroclor-1232	0.25	U
53469-21-9	Aroclor-1242	0.25	U
12672-29-6	Aroclor-1248	0.25	U
11097-69-1	Aroclor-1254	3.5	J
11096-82-5	Aroclor-1260	0.68	

EPA SAMPLE NO. K40319R Lab Name: Aquatec, Inc. Lab Code: AQUAI Contract: 91082 Case: BIO SDG: 42799 **BIOTA** Lab Sample ID: Phase Type: 213469 10.0 Date Received: 03/09/94 Phase Weight: **(g)** Injection Volume: _ 1.0 (uL) Date Extracted: 03/23/94 Dilution Factor: 10.0 Date Analyzed: 05/02/94 _ (Y/N) Sulfur Clean-up: N

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	Q
12674-11-2	Aroclor-1016	0.50	U
11104-28-2	Aroclor-1221	0.50	U
11141-16-5	Aroclor-1232	0.50	U
53469-21-9	Aroclor-1242	0.50	U
12672-29-6	Aroclor-1248	0.50	U
11097-69-1	Aroclor-1254	4.7	
11096-82-5	Aroclor-1260	0.98	

EPA SAMPLE NO.

K40320F

Lab Name: Aquatec, Inc. 91082

5.0

Lab Code: AQUAI

BIO

Lab Sample ID:

Case:

SDG: 42799

213471

BIOTA Phase Type: 10.0 Phase Weight: _ **(g)** 1.0 (uL) Injection Volume: _

Contract:

Dilution Factor: __

Date Received: 03/09/94 Date Extracted: 03/23/94

Date Analyzed: 05/02/94

Sulfur Clean-up: (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	0
12674-11-2	Aroclor-1016	0.86	
11104-28-2	Aroclor-1221	0.25	U
11141-16-5	Arocior-1232	0.25	U
53469-21-9	Aroclor-1242	0.25	U
12672-29-6	Aroclor-1248	0.25	U
11097-69-1	Aroclor-1254	1.6	
11096-82-5	Aroclor-1260	0.25	U

EPA SAMPLE NO.

K40320R Lab Name: Aquatec, Inc. Lab Code: IAUDA 91082 BIO SDG: 42799 Contract: Case: **BIOTA** Phase Type: Lab Sample ID: 213472 Phase Weight: 10.0 Date Received: 03/09/94 (g) 03/23/94 Injection Volume: 1.0 (uL) Date Extracted: Dilution Factor: ___ 10.0 Date Analyzed: 05/02/94 Sulfur Clean-up: _ (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	_ 0
12674-11-2	Aroclor-1016	2.3	
11104-28-2	Aroclor-1221	0.50	U
11141-16-5	Aroclor-1232	0.50	U
53469-21-9	Aroclor-1242	0.50	U
12672-29-6	Aroclor-1248	0.50	U
11097-69-1	Aroclor-1254	4.7	
11096-82-5	Aroclor-1260	0.50	U

EPA SAMPLE NO. K40321F Lab Name: Aquatec, Inc. Lab Code: AQUAI 91082 Contract: Case: BIO SDG: 42799 Phase Type: BIOTA Lab Sample ID: 213474 Phase Weight: 10.0 Date Received: **(g)** 03/09/94 Injection Volume: _ 1.0 (uL) Date Extracted: 03/23/94 Dilution Factor: 20.0 Date Analyzed: 05/02/94 Sulfur Clean-up: _ (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	<u> </u>
12674-11-2	Arocior-1016	1.0	U
11104-28-2	Aroclor-1221	1.0	U
11141-16-5	Aroclor-1232	1.0	υ
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	7.5	
11097-69-1	Arocior-1254	2.1	
11096-82-5	Aroclor-1260	1.0	U

EPA SAMPLE NO.

Phase Type: BIOTA Lab Sample ID: 213475 10.0 Phase Weight: (g) Date Received: 03/09/94 Injection Volume: _ 1.0 (uL) Date Extracted: 03/23/94 Dilution Factor: ____ 20.0 Date Analyzed: 05/02/94

Sulfur Clean-up: ____ N (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	<u> </u>
12674-11-2	Arocior-1016	1.0	υ
11104-28-2	Aroclor-1221	1.0	υ
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.2	
11097-69-1	Aroclor-1254	3.1	
11096-82-5	Arocior-1260	1.0	υ

EPA SAMPLE NO.

K40326F

Lab Name: Aquatec, Inc.

Lab Code: AQUAI

91082 Contract: _

Case: _ BIO SDG: ___ 42799

Phase Type: **BIOTA** Phase Weight: 10.0 (g) Injection Volume: _ 1.0 (uL) Dilution Factor: __ 10.0

Lab Sample ID: 213477

Date Received: 03/09/94 Date Extracted:

Date Analyzed: 05/02/94

03/23/94

Sulfur Clean-up:

(Y/N)

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	
12674-11-2	Aroclor-1016	0.50	Ų
11104-28-2	Arocior-1221	0.50	U
11141-16-5	Aroclor-1232	0.50	U
53469-21-9	Aroclor-1242	0.50	U
12672-29-6	Aroclor-1248	0.50	U
11097-69-1	Aroclor-1254	5.4	
11096-82-5	Aroclor-1260	1.1	

Dilution Factor:

20.0

K40326R Lab Name: Aquatec, Inc. Lab Code: AQUAL SDG: 42799 91082 Contract: Case: BIO Phase Type: **BIOTA** Lab Sample ID: 213478 Phase Weight: 10.0 Date Received: 03/09/94 (g) Injection Volume: 1.0 (uL) Date Extracted: 03/23/94

Sulfur Clean-up: N (Y/N)

05/02/94

Date Analyzed:

EPA SAMPLE NO.

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	
12674-11-2	Aroclor-1016	1.0	Ų
11104-28-2	Aroclor-1221	1.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	7.5	
11096-82-5	Aroclor-1260	1.6	

EPA SAMPLE NO.

K40327F

Lab Name: Aquatec, Inc. Lab Code: AQUAI

Contract: 91082 Case: BIO SDG: 42799

Phase Type: BIOTA Lab Sample ID: 213480

 Phase Weight:
 10.0
 (g)
 Date Received:
 03/09/94

 Injection Volume:
 1.0
 (uL)
 Date Extracted:
 03/23/94

Dilution Factor: 10.0 Date Analyzed: 05/02/94

Sulfur Clean-up: N (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	
12674-11-2	Arocior-1016	0.50	U
11104-28-2	Aroclor-1221	0.50	U
11141-16-5	Aroclor-1232	0.50	U
53469-21-9	Aroclor-1242	0.50	U
12672-29-6	Aroclor-1248	4.9	
11097-69-1	Aroclor-1254	3.2	
11096-82-5	Aroclor-1260	1.0	-

EPA SAMPLE NO. K40327R Lab Code: Lab Name: Aquatec, Inc. AQUAL 42799 91082 Case: BIO SDG: Contract: Phase Type: _ **BIOTA** Lab Sample ID: 213481 Date Received: 03/09/94 Phase Weight: __ 10.0 (g) Injection Volume: _ Date Extracted: 03/23/94 (uL) 1.0 05/02/94 Dilution Factor: __ 20.0 Date Analyzed: Sulfur Clean-up: Ν (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	C
12674-11-2	Aroclor-1016	1.0	
11104-28-2	Aroclor-1221	1.0	į
11141-16-5	Aroclor-1232	1.0	Ĺ
53469-21-9	Aroclor-1242	1.0	Ĺ
12672-29-6	Aroclor-1248	7.7	
11097-69-1	Aroclor-1254	5.0	
11096-82-5	Aroclor-1260	1.6	

EPA SAMPLE NO.

 Lab Code:
 AQUAI

 Case:
 BIO

 SDG:
 42799

BIOTA Lab Sample ID: 213483 Phase Type: Phase Weight: __ 10.0 03/09/94 (g) Date Received: Injection Volume: __ 1.0 (uL) Date Extracted: 03/23/94 Dilution Factor: ____ 1.0 Date Analyzed: 04/27/94

Lab Name: Aquatec, Inc.

Contract:

91082

Sulfur Clean-up: N (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	
12674-11-2	Aroclor-1016	0.050	Ĺ
11104-28-2	Aroclor-1221	0.050	l
11141-16-5	Aroclor-1232	0.050	l
53469-21-9	Aroclor-1242	0.050	ι
12672-29-6	Aroclor-1248	0.050	ι
11097-69-1	Aroclor-1254	0.028	J
11096-82-5	Aroclor-1260	0.027	J

EPA SAMPLE NO. K40421R Lab Name: Aquatec, Inc. Lab Code: IAUDA Contract: 91082 Case: BIO SDG: 42799 Phase Type: **BIOTA** Lab Sample ID: 213484 Phase Weight: _ 10.0 Date Received: (g) 03/09/94 Injection Volume: _ Date Extracted: 1.0 (uL) 03/23/94 Dilution Factor: 1.0 Date Analyzed: 04/27/94 Sulfur Clean-up: N (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	0
12674-11-2	_Aroclor-1016	0.050	U
11104-28-2	Aroclor-1221	0.050	U
11141-16-5	Aroclor-1232	0.050	U
53469-21-9	Arocior-1242	0.050	U
12672-29-6	Arocior-1248	0.050	U
11097-69-1	Aroclor-1254	0.065	
11096-82-5	Aroclor-1260	0.060	

EPA SAMPLE NO. K40422F Lab Code: Lab Name: Aguatec, Inc. AQUAL 91082 Case: BIO SDG: 42799 Contract: **BIOTA** Lab Sample ID: 213486 Phase Type: 10.0 03/09/94 Phase Weight: Date Received: (g) Injection Volume: ___ Date Extracted: 1.0 (uL) 03/23/94 Dilution Factor: _____ 1.0 04/27/94 Date Analyzed: Sulfur Clean-up: N (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	0
12674-11-2	Aroclor-1016	0.050	u
11104-28-2	Aroclor-1221	0.050	U
11141-16-5	Arocior-1232	0.050	U
53469-21-9	Aroclor-1242	0.050	U
12672-29-6	Aroclor-1248	0.050	U
11097-69-1	Aroclor-1254	0.061	
11096-82-5	Aroclor-1260	0.029	J

EPA SAMPLE NO. K40422R Lab Code: Lab Name: Aquatec, Inc. AQUAI 91082 BIO Contract: Case: SDG: 42799 Phase Type: **BIOTA** Lab Sample ID: 213487 Phase Weight: 10.0 Date Received: (g) 03/09/94 Injection Volume: 1.0 (uL) Date Extracted: 03/23/94 Dilution Factor: Date Analyzed: 04/27/94 1.0 Sulfur Clean-up: Ν (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	0
12674-11-2	Aroclor-1016	0.050	U
11104-28-2	Aroclor-1221	0.050	U
11141-16-5	Aroclor-1232	0.050	U
53469-21-9	Arocior-1242	0.050	U
12672-29-6	Aroclor-1248	0.050	U
11097-69-1	Aroclor-1254	0.15	
11096-82-5	Aroclor-1260	0.066	

EPA SAMPLE NO. K40423F Lab Code: Lab Name: Aquatec, Inc. AQUAL 91082 SDG: 42799 Case: BIO Contract: **BIOTA** Lab Sample ID: 214490 Phase Type: 10.0 Date Received: 03/20/94 Phase Weight: (g) Injection Volume: 1.0 (uL) Date Extracted: 03/25/94 1.0 Date Analyzed: 04/28/94 Dilution Factor: _ Sulfur Clean-up: _ (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	<u>a</u>
12674-11-2	Aroclor-1016	0.050	U
11104-28-2	Aroclor-1221	0.050	U
11141-16-5	Aroclor-1232	0.050	υ
53469-21-9	Aroclor-1242	0.050	U
12672-29-6	Aroclor-1248	0.050	U
11097-69-1	Aroclor-1254	0.059	
11096-82-5	Aroclor-1260	0.043	J
		1	

EPA SAMPLE NO. K40423R Lab Name: Aquatec, Inc. Lab Code: IAUDA 91082 BIO SDG: 42799 Contract: Case: **BIOTA** Lab Sample ID: 214491 Phase Type: Phase Weight: _ 10.0 Date Received: 03/20/94 **(g)** Injection Volume: 1.0 (uL) Date Extracted: 03/25/94 1.0 Date Analyzed: 04/28/94 Dilution Factor: Sulfur Clean-up: N (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	Q
12674 11 2	Assolate 1016	0.050	
12674-11-2	Aroclor-1016		U.7
11104-28-2	Aroclor-1221	0.050	<u> 07</u>
11141-16-5	Aroclor-1232	0.050	02
53469-21-9	Aroclor-1242	0.050	<u>U</u>
12672-29-6	Aroclor-1248	0.050	リゴ
11097-69-1	Aroclor-1254	0.087	J
11096-82-5	Arocior-1260	0.061	

EPA SAMPLE NO.

 Lab Name:
 Aquatec, Inc.
 Lab Code:
 AQUAI

 Contract:
 91082
 Case:
 BIO
 SDG:
 42799

 hase Type:
 BIOTA
 Lab Sample ID:
 213489

 Phase Type:
 BIOTA
 Lab Sample ID:
 213489

 Phase Weight:
 10.0
 (g)
 Date Received:
 03/09/94

 Injection Volume:
 1.0
 (uL)
 Date Extracted:
 03/23/94

 Dilution Factor:
 1.0
 Date Analyzed:
 04/27/94

Sulfur Clean-up: N (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	
12674-11-2	Aroclor-1016	0.050	ι
11104-28-2	Aroclor-1221	0.050	L
11141-16-5	Aroclor-1232	0.050	U
53469-21-9	Aroclor-1242	0.050	U
12672-29-6	Aroclor-1248	0.050	U
11097-69-1	Aroclor-1254	0.033	J
11096-82-5	Aroclor-1260	0.025	J

EPA SAMPLE NO.

K40427R Lab Code: Lab Name: Aquatec, Inc. IAUDA 91082 Case: BIO SDG: 42799

BIOTA Lab Sample ID: 213490 Phase Type: _ Phase Weight: 10.0 **(g)** Date Received: 03/09/94 Injection Volume: 1.0 (uL) Date Extracted: 03/23/94 Dilution Factor: _ 1.0 04/27/94 Date Analyzed: Sulfur Clean-up: (Y/N)

Contract:

	1
0.050	U
0.071	
0.042	J
12672-29-6 Aroclor-1248 0. 11097-69-1 Aroclor-1254 0.	0.071

EPA SAMPLE NO. K40428F AQUAI Lab Name: Aquatec, Inc. Lab Code: 91082 BIO SDG: 42799 Contract: Case: **BIOTA** Lab Sample ID: 213492 Phase Type: Phase Weight: 10.0 (g) Date Received: 03/09/94 Injection Volume: 1.0 (uL) Date Extracted: 03/23/94 Dilution Factor: ___ 1.0 Date Analyzed: 04/27/94 Sulfur Clean-up: (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	Q
12674-11-2	Aroclor-1016	0.050	U
11104-28-2	Aroclor-1221	0.050	u
11141-16-5	Aroclor-1232	0.050	U
53469-21-9	Aroclor-1242	0.050	
12672-29-6	Aroclor-1248	0.050	U
11097-69-1	Aroclor-1254	0.090	
11096-82-5	Aroclor-1260	0.050	Ū

EPA SAMPLE NO.

K40428R Lab Name: Aquatec, Inc. Lab Code: _ AQUAI Contract: 91082 Case: BIO SDG: 42799 **BIOTA** Phase Type: Lab Sample ID: 213493 Phase Weight: 10.0 (g) Date Received: 03/09/94 Injection Volume: 1.0 (uL) Date Extracted: 03/23/94 Dilution Factor: ___ 1.0 Date Analyzed: 04/27/94 Sulfur Clean-up: (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	0
12674-11-2	Arocior-1016	0.050	U
11104-28-2	Aroclor-1221	0.050	U
11141-16-5	Aroclor-1232	0.050	U
53469-21-9	Aroclor-1242	0.050	U
12672-29-6	Aroclor-1248	0.050	U
11097-69-1	Arocior-1254	0.041	J
11096-82-5	Aroclor-1260	0.021	J

EPA SAMPLE NO.

K40430F

 Lab Name:
 Aquatec, Inc.
 Lab Code:
 AQUAI

 Contract:
 91082
 Case:
 BIO
 SDG:
 42799

214487 Lab Sample ID: Phase Type: ___ BIOTA Date Received: 03/20/94 Phase Weight: 10.0 (0) Date Extracted: 03/25/94 (uL) Injection Volume: 1.0 Dilution Factor: 1.0 Date Analyzed: 05/03/94 Sulfur Clean-up: __ (Y/N)

> CONCENTRATION CAS NO. COMPOUND (mg/Kg) Q 0.050 Aroclor-1016 U 12674-11-2 0.050 U 11104-28-2 Aroclor-1221 0.050 Aroclor-1232 U 11141-16-5 0.050 U 53469-21-9 Arocior-1242 12672-29-6 Aroclor-1248 0.050 U 0.030 11097-69-1 Aroclor-1254 0.025 11096-82-5 Aroclor-1260

K40430R SDG: 42799

EPA SAMPLE NO.

Lab Sample ID: Phase Type: BIOTA 214488 Phase Weight: 10.0 Date Received: 03/20/94 (g) Injection Volume: Date Extracted: 1.0 (uL) 03/25/94 Dilution Factor: 1.0 Date Analyzed: 04/28/94 Sulfur Clean-up: N (Y/N)

Lab Code: __

Case:

AQUAL

BIO

Lab Name: Aquatec, Inc.

Contract:

91082

CAS NO. **COMPOUND** CONCENTRATION Q (mg/Kg) 12674-11-2 0.050 U Aroclor-1016 11104-28-2 Aroclor-1221 0.050 U 11141-16-5 Aroclor-1232 0.050 U 53469-21-9 Aroclor-1242 0.050 U 12672-29-6 Aroclor-1248 0.050U 11097-69-1 Aroclor-1254 0.10 0.090 11096-82-5 Aroclor-1260

PESTICIDE ANALYSES

Introduction

Analyses were performed according to the USEPA SW-846 Method 8081.

The data review process is intended to evaluate the data on a technical basis. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with National Functional Guidelines:

- U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
- J The compound was positively identified; however, the associated numerical value is an estimated concentration only.
- B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.
- N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.
- JN The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.
- E The compound was quantitated above the calibration range.
- D Concentration is based on a diluted sample analysis.
- C Identification confirmed by GC/MS.
- UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.
- R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant QC problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC test, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

Data Assessment

1. Holding Time

The holding time for pesticide extracts is 40 days from extraction to analysis. No deviations from this holding time were noted.

2. Blank Contamination

Quality assurance blanks, i.e., method and instrument blanks, are prepared to identify any contamination which may have been introduced into the samples during sample preparation or analysis. Method blanks measure laboratory contamination during preparation. Instrument blanks measure instrument contamination and sample cross-contamination.

No target compounds were detected in either the method blanks or instrument blanks.

3. System Performance

The resolution and compound breakdown was within acceptable limits for both columns.

4. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of giving acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument is giving satisfactory daily performance.

4.1 Initial Calibration

A maximum RSD of 20% is allowed. All initial calibrations were within the specified limit.

4.2 Continuing Calibration

A maximum RPD of 25% is allowed. All continuing calibrations were within the specified limit.

5. Surrogates / System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique.

Recoveries were below acceptable control limits for both surrogates in samples K40239F, K40239R, K40244R, K40320F, K40326R, K40423F, and K40423R. All data for these samples have been qualified as estimated. Samples K40438F, K40430R and K40244F had one surrogate recovery below acceptable control limits. No qualifiers were added to these samples due to the deviation. All other surrogate recoveries were within acceptable control limits.

6. Compound Identification

The retention times of pesticide/PCB compounds must fall within the calculated retention time windows for both the primary and confirmation columns.

The quantitated concentrations between the two columns exceeded the 25% difference limit for the following samples and compounds:

K40241R	Aldrin 4,4'-DDT	34.0% 165.0%
K40242R	trans-Nonachlor	39.3%
K40245R	3-Bromobiphenyl trans-Nonachior 4,4'-DDT	41.7% 30.4% 314.9%
K40304F	Aldrin gamma-Chlordane cis-Nonachlor 4,4'-DDT	38.5% 157.1% 66.7% 514.3%
K40304R	Aldrin gamma-Chlordane trans-Nonachlor	38.6% 139.3% 273.8%
K40304RDL	Aldrin gamma-Chlordane cis-Nonachlor 4,4'-DDT	36.6% 139.5% 33.9% 507.6%
K40305F	Aldrin gamma-Chlordane trans-Nonachlor	53.7% 156.3% 327.3%
K40305R	Aldrin gamma-Chlordane trans-Nonachlor	56.5% 131.3% 286.4%

K40305RDL	Aldrin	55.4%
K40306F	Aldrin gamma-Chlordane	69.2% 129.7%
K40306R	Aldrin gamma-Chlordane	78.0% 108.6%
K40306RDL	Aldrin gamma-Chlordane 4,4'-DDT	83.0% 110.5% 637.2%
K40308F	Aldrin gamma-Chlordane trans-Nonachlor cis-Nonachlor	46.3% 146.2% 300.0% 29.4%
K40308R	Aldrin gamma-Chlordane trans-Nonachlor	54.0% 117.1% 312.5%
K40308RDL	Aldrin gamma-Chlordane 4,4'-DDT	51.9% 125.6% 486.9%
K40309F	Aldrin gamma-Chlordane trans-Nonachlor 4,4'-DDE cis-Nonachlor	47.8% 120.0% 28.3% 31.5% 46.2%
K40309R	Aldrin gamma-Chlordane trans-Nonachlor cis-Nonachlor	60.8% 120.5% 330.0% 25.7%
K40309RDL	Aldrin gamma-Chlordane 4,4'-DDD cis-Nonachlor 4,4'-DDT	54.8% 120.8% 37.1% 33.8% 537.8%
K40310F	Aldrin gamma-Chlordane 4,4-DDE cis-Nonachlor	38.9% 154.5% 29.8% 30.8%
K40310R	Aldrin gamma-Chlordane trans-Nonachlor	44.8% 157.9% 283.3%

K40310RDL	Aldrin gamma-Chlordane	40.7% 161.8%
K40318F	Aldrin gamma-Chlordane	52.9% 88.9%
K40318R	Aldrin Heptachlor Epoxide gamma-Chlordane	48.4% 27.3% 82.4%
K40319F	Aldrin gamma-Chlordane 4,4'-DDE	44.4% 84.6% 31.5%
K40319R	Aldrin gamma-Chlordane cis-Nonachlor	47.7% 94.3% 59.5%
K40319RDL	Aldrin gamma-Chlordane 4,4'-DDE	41.0% 100.0% 29.4%
K40320F	Heptachlor Epoxide gamma-Chlordane 4,4'-DDE	29.4% 146.7% 35.5%
K40320R	Aldrin gamma-Chlordane	25.7% 141.4%
K40320RDL	gamma-Chlordane alpha-Chlordane 4,4'-DDE 4,4'-DDT	151.6% 27.3% 35.1% 616.7%
K40321F	Aldrin Heptachlor Epoxide gamma-Chlordane trans-Nonachlor 4,4'-DDE	28.0% 37.0% 110.4% 262.9% 28.3%
K40321FDL	Heptachlor Epoxide gamma-Chlordane 4,4'-DDE	37.3% 118.2% 47.9%
K40321R	Aldrin Heptachlor Epoxide gamma-Chlordane trans-Nonachlor 4,4'-DDE	29.6% 40.8% 105.7% 241.5% 26.5%

K40321RDL	Aldrin Heptachlor Epoxide gamma-Chlordane alpha-Chlordane 4,4'-DDE 4,4'-DDT	25.1% 34.1% 123.5% 32.0% 49.5% 600.0%
K40326F	Aldrin gamma-Chlordane trans-Nonachlor	72.7% 91.2% 326.9%
K40326FDL	Aldrin gamma-Chlordane 4,4'-DDE cis-Nonachlor	68.4% 92.1% 27.4% 28.6%
K40326R	Aldrin gamma-Chlordane trans-Nonachlor cis-Nonachlor	73.5% 84.0% 322.2% 26.3%
K40327F	Aldrin Heptachlor Epoxide gamma-Chlordane trans-Nonachlor	48.0% 28.8% 79.6% 243.2%
K40327FDL	Aldrin Heptachlor Epoxide gamma-Chlordane 4,4'-DDE 4,4'-DDT	42.5% 25.9% 88.7% 30.8% 600.0%
K40327R	Aldrin gamma-Chlordane trans-Nonachlor	50.0% 81.7% 223.6%
K40327RDL	Aldrin gamma-Chlordane 4,4'-DDE 4,4'-DDT	41.8% 90.1% 32.8% 618.4%

All data in the samples for the compounds listed has been qualified. Data with %D values between 25 and 50% has been qualified as estimated, J. All data with %D values between 50 and 90% has been qualified as estimated with presumptive evidence of presence, JN. All data with %D values greater than 90% has been rejected.

7. Matrix Spike/Matrix Spike Duplicate

Matrix spike and matrix spike duplicate data are used to assess the precision and accuracy of the analytical method.

Matrix spike and matrix spike duplicate analyses were performed on three samples, K40244R, K40326F and K40326R. Recovery of Aldrin in all matrix spike and matrix spike duplicate samples was above the specified control limit. Spike recoveries for Dieldrin and 4,4'-DDT were also above the acceptable control limits in samples K40326F and K40326R. The elevated recoveries can be attributed to positive interference from the PCB matrix spiking solution. All other recoveries and the relative percent difference (RPD) between recoveries were within acceptable control limits. Matrix spike recoveries were within acceptable control limits for the matrix spike blank (MSB) sample. No qualifiers were added to the samples based on matrix spike performance.

8. General Comments

The recommended data usage for the sample dilutions are as follows:

K40304R and K40304R-DL

The data from sample K40304R should be used for all compounds except Aldrin, Heptachlor Epoxide, 4,4'-DDE and cis-Nonachlor. Data from the dilution K40304R-DL should be used for Aldrin, Heptachlor Epoxide, 4,4'-DDE and cis-Nonachlor only.

K40305R and K40305R-DL

The data from sample K40305R should be used for all compounds except Aldrin and 4,4'-DDE. Data from the dilution K40305R-DL should be used for Aldrin and 4,4'-DDE only.

K40306R and K40306R-DL

The data from sample K40306R should be used for all compounds except 4,4'-DDE. Data from the dilution K40304R-DL should be used for 4,4'-DDE only.

K40308R and K40308R-DL

The data from sample K40308R should be used for all compounds except Aldrin, Heptachlor Epoxide, trans-Nonachlor and 4,4'-DDE. Data from the dilution K40308R-DL should be used for Aldrin, Heptachlor Epoxide, trans-Nonachlor and 4,4'-DDE only.

K40309R and K40309R-DL

The data from sample K40309R should be used for all compounds except 4,4'-DDE. Data from the dilution K40309R-DL should be used for 4,4'-DDE only.

K40310R and K40310R-DI

The data from sample K40310R should be used for all compounds except Aldrin, Heptachlor Epoxide and 4,4'-DDE. Data from the dilution K40310R-DL should be used for Aldrin, Heptachlor Epoxide and 4,4'-DDE only.

K40319R and K40319R-DL

The data from sample K40319R should be used for all compounds except Aldrin. Data from the dilution K40319R-DL should be used for Aldrin only.

K40320R and K40320R-DL

The data from sample K40320R should be used for all compounds except Aldrin. Data from the dilution K40320R-DL should be used for Aldrin only.

K40321F and K40321F-DL

The data from sample K40321F should be used for all compounds except Aldrin and trans-Nonachlor. Data from the dilution K40321F-DL should be used for Aldrin and trans-Nonachlor only.

K40321R and K40321R-DL

The data from sample K40321R should be used for all compounds except Aldrin, Heptachlor Epoxide, trans-Nonachlor and 4,4'-DDE. Data from the dilution K40321R-DL should be used for Aldrin, Heptachlor Epoxide, trans-Nonachlor and 4,4'-DDE only.

K40326F and K40326F-DL

The data from sample K40326F should be used for all compounds except trans-Nonachlor and 4,4'-DDE. Data from the dilution K40326F-DL should be used for trans-Nonachlor and 4,4'-DDE only.

K40327F and K40327F-DL

The data from sample K40327F should be used for all compounds except Aldrin, 4,4'-DDE and trans-Nonachlor. Data from the dilution K40327F-DL should be used for Aldrin, 4,4'-DDE and trans-Nonachlor only.

K40327R and K40327R-DL

The data from sample K40327R should be used for all compounds except Aldrin, 4,4'-DDE and trans-Nonachlor. Data from the dilution K40327R-DL should be used for Aldrin, 4,4'-DDE and trans-Nonachlor only.

9. System Performance and Overall Assessment

Overall system performance was acceptable. Other than those deviations specifically mentioned in this review, the overall data quality is within the quidelines listed in the analytical method.

Data Validation Checksheets

Pesticide Data Validation Checklist

	YES	NO	NA
Data Completeness and Deliverables			
Is there a narrative or cover letter present?	X		
Are the samples numbers included in the narrative?	X		
Are the sample chain-of-custodies present?	X		
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?		x	
Holding Times			
Have any holding times been exceeded?		X	
Surrogate Recovery			
Are the surrogate recovery forms present?	X		
Are all the samples listed on the appropriate surrogate recovery form?	<u> </u>		
Are the outliers correctly marked with an asterisk?	X		
Were recoveries of TCMX or DCB outside of specified limits for any sample or blank?	<u> </u>		
If yes, were the samples reanalyzed?		X	
Were the method blanks reanalyzed?			X
Matrix Spikes			
Is there a matrix spike recovery form present?	<u> </u>		
Were matrix spikes analyzed at the required frequency?	X		
How many spike recoveries were outside of QC limits?			
11 out of24			
How many RPDs for matrix spike and matrix spike duplicate were outside of QC limits?			
Blanks			
ls the method blank summary form present?	<u> </u>		
Has a method blank been analyzed for each set of samples or for each 20 samples, whichever is more frequent?	X		
Has an instrument blank been analyzed at the beginning of each 12 hour period following the initial calibration?	x		

Pesticide/PCB Data Validation Checklist - Page 2

	YES	NO	NA
ts the chromatographic performance acceptable for each instrument?	X	· ·	
Do any method/reagent/instrument blanks have positive results?		X	
Do any trip/field/rinse blanks have positive results?			<u>X</u>
Are there field/rinse/equipment blanks associated with every sample?		X	
Calibration and GC Performance			
Are the following chromatograms and data printouts presblanks, and MS/MSD?	sent for a	all samples,	
peak resolution check	<u> </u>		
performance evaluation mixtures (BCS)	<u>X</u>		
Toxaphene multipoint calibration	<u> </u>		
Pesticide/PBB multipoint calibration	<u> </u>		
Pesticide/PBB mid-point standard	X		
instrument blanks	<u> </u>		
Are Forms VI 1-4 present and complete for each column and analytical sequence?	x		
Are the linearity criteria for the initial analyses if INDA and INDB within limits for both columns?	x		
Is the resolution between any two adjacent peaks in the resolution check mixture > 60% for both columns?	X		
Is Form VII-1 present for each BCS analyzed for both columns?	X		
Has the individual % breakdown exceeded 20% on either column for 4,4'-DDT		X	
Are all the relative percent difference (RPD) values for all PEM analytes < 25%?	X		
Is Form VII-2 present and complete for each mid-point standard analyzed?	X		
Are RPD values for all compounds < 25%?	X		

Analytical Sequence Check

Pesticide/PCB Data Validation Checklist - Page 3

	YES	NO	NA
is Form VIII present and complete for each column and each period of analyses?	X		
Was the proper analytical sequence followed?	X		
Cleanup Efficiency Verification			
Is Form IX-1 present for each lot of Florisil cartridges used?	x		
Are all samples listed on the form?	X		
If GPC cleanup was performed, is Form IX-2 present?			X
Are percent recoveries of the compounds used to check the efficiency of the cleanup procedure within QC limits for:			
Florisil cartridge check (80-120%)	X		
GPC calibration (80-110%)			X
Pesticide/PBB Identification			
Is a Form X present for every sample in which a pesticide or PCB was detected?	x		
Was GC/MS confirmation provided when required?			X
Is the percent difference (%D) calculated for the positive sample results on the two columns less than 25%?		X	
Were there any false negatives?		X	
Compound Quantitation and Reported Detection Limit	<u>s</u>		
Are the reporting limits adjusted to reflect sample dilutions, and for soils, sample moisture?	x		
Chromatogram Quality			
Were the baselines stable?	X		
Were any electronegative displacement (negative peaks) or unusual peaks detected?		X	
Field Duplicates		·	
Where field duplicates submitted with the samples?		X	

Pesticide/PBB Qualifier Summary Holding Time and Surrogates

Sample ID	Holding	Surrogates	- Column 1	Surrogates - Column 2		
	Time	TCX	DCB	TCX	DCB	
K40239F	OK for all	↓ (34)	↓ (33)	↓ (53)	↓ (33)	
K40239R	samples	↓ (54)	↓ (55)		↓ (54)	
K40240F						
K40240R		·				
K40241F						
K40241R						
K40242F						
K40242R						
K40244F			Į (59)		↓ (59)	
K40244R		↓ (30)	↓ (40)	↓ (32)	↓ (31)	
K40244RMS						
K40244RMSD		↓ (57)	↓ (56)		↓ (55)	
K40245F						
K40245R						
K40304F						
K40304R					•	
K40304RDL						
K40305F						
K40305R						
K40305RDL						
K40306F						
K40306R						
K40306RDL						
K40308F						
K40308R						
K40308RDL						
K40309F						
K40309R						
K40309RDL						
K40310F						
K40310R						

Sample ID	Halding	Surrogates	- Column 1	Surrogates - Column 2		
	Time	тсх	TCX DCB		DCB	
K40310RDL						
K40318F						
K40318R						
K40319F						
K40319R						
K40319RDL		•				
K40320F		↓ (45)	↓ (46)	↓ (44)	↓ (46)	
K40320R						
K40320RDL						
K40321F						
K40321FDL						
K40321R						
K40321RDL						
K40326F						
K40326FDL						
K40326FMS						
K40326FMSD						
K40326R		↓ (50)	↓ (54)	↓ (46)	Į (52)	
K40326RMS						
K40326RMSD						
K40327F						
K40327FDL						
K40327R						
K40327RDL						
K40421F						
K40421R						
K40422F						
K40422R						
K40423F			↓ (58)	↓ (57)	↓ (57)	
K40423R		↓ (52)		↓ (55)	↓ (54)	
K40427F						
K40427R						
<40428F						

Sample 1D	Holding	Surrogates	- Column 1	Surrogates	- Column 2
	Time	тсх	DCB	тсх	DCB
K40428R					
K40430F					
K40430R			,		

Surrogates:

TCX Tetrachloro-m-xylene DCB Decachiorobiphenyl

Qualifiers:

Surrogate diluted out Recovery high D

Recovery low

Unless otherwise noted, all samples are within specified limits.



Date:	4/26/94	4/27	4/27	4/27	4/28	4/28	4/28
Time:	20:30	06:37	14:57	23:17	07;38	15:57	21:55
-	initial Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Gont. Cal.
	%ASD	% D					
2-Bromobiphenyl	ok	ok	ok	ok	ok	ok	ok
3-Bromobiphenyl							
4-Bromobiphenyl							
Hexachlorobenzene							
gamma-BHC (Lindane)							
Aldrin							
Heptaclor epoxide							
gamma-Chlordane							
alpha-Chlordane							
trans-Nonachlor							
4,4'-DDE							
Dieldrin							
4,4'-DDD							
cis-Nonachlor							
4,4'-DDT							···
Hexabromobiphenyl (BP-6)					<u>-</u>		
Toxaphene							
Tetrachioro-m-xylene							<u>.</u>
Decachlorobiphenyl							
Affected Samples:							
. [
Γ							

Date:		4/29	4/30	4/30	4/30	5/1	5/1
Time:		18:05	02:24	10;51	19:56	04:16	13:13
	Initial Cal.	Cont. Cal.	Cont. Cal.	Gont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.
	%ASD	%D	%D	%D	% D	% D	% D
2-Bromobiphenyl		ok	ok	ok	ok	ok	ok
3-Bromobiphenyl							
4-Bromobiphenyl							
Hexachiorobenzene							
gamma-BHC (Lindane)							
Aldrin							
Heptaclor epoxide							
gamma-Chlordane							
alpha-Chlordane							
rans-Nonachlor							
4,4'-DDE							
Dieldrin							
1,4'-DDD							-
cis-Nonachlor							
I,4'-DDT							
Hexabromobiphenyl BP-6)							
oxaphene							
etrachloro-m-xylene							
Decachlorobiphenyl							
flected Samples:							

Date:		5/2	5/2	5/3	5/3	5/3	5/4
Time;		09:58	18:18	02:37	10:57	19:18	03:39
	initial Cal:	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont.
	%RSD	%D	% D	% D	%D	%D	% D
2-Bromobiphenyl		ok	ok	ok	ok	ok	ok
3-Bromobiphenyl							
4-Bromobiphenyl							
Hexachlorobenzene							
gamma-BHC (Lindane)							
Aldrin							
Heptaclor epoxide							
gamma-Chlordane							
alpha-Chlordane						ï	
trans-Nonachior							
4,4'-DDE							
Dieldrin							
4,4'-DDD							
cis-Nonachlor							
4,4'-DDT							
Hexabromobiphenyl (BP-6)							
Toxaphene							
Tetrachloro-m-xylene							
Decachlorobiphenyl							
iflected Samples:							
Γ							

Date:		5/4					
Time;		11:59					
	Initial Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont.
	%RSD	% D	% D	% D	%Đ	% D	% D
2-Bromobiphenyl		ok					
3-Bromobiphenyl					<u></u>		
4-Bromobiphenyl							
Hexachlorobenzene							
gamma-BHC (Lindane)							
Aldrin							
Heptaclor epoxide							
gamma-Chlordane							
alpha-Chlordane							
trans-Nonachlor							
4,4'-DDE							
Dieldrin							
4,4'-DDD							
cis-Nonachlor							
4,4'-DDT							
Hexabromobiphenyl (BP-6)							
Toxaphene							
Tetrachioro-m-xylene							
Decachtorobiphenyl							
ffected Samples:							
Ţ.							

Date;	5/5/94	5/6					
Time:	15:45	02:27					
	initial Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Gont. Cal.
	%RSD	% D	% D	%D	%D	%D	% D
2-Bromobiphenyl	ok	ok					
3-Bromobiphenyl							
4-Bromobiphenyl				<u> </u>			
Hexachlorobenzene							<u> </u>
gamma-BHC (Lindane)							
Aldrin							
Heptaclor epoxide		:					
gamma-Chlordane							
alpha-Chiordane							
trans-Nonachlor				·			
4,4'-DDE							
Dieldrin							
4,4'-DDD							
cis-Nonachlor							
4,4'-DDT							
Hexabromobiphenyl (BP-6)							
Toxaphene							
Tetrachioro-m-xylene							
Decachlorobiphenyl							·—-
ffected Samples:							
Γ							

Date:	5/6/94	5/7	5 <i>[</i> 7	5/7	5/8	5/8	5/8
Time:	17:21	04:04	12:24	20:43	05:03	13:24	21:45
	Initial Cal:	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.
	%RSD	%D	% D				
2-Bromobiphenyl	ok	ok	ok	ok	ok	ok	ok
3-Bromobiphenyl				·			
4-Bromobiphenyl					! 		
Hexachlorobenzene							
gamma-BHC (Lindane)							
Aldrin							
Heptaclor epoxide							
gamma-Chlordane							
alpha-Chlordane							
trans-Nonachlor							
4,4'-DDE							
Dieldrin							
4,4'-DDD							
cis-Nonachlor							
4,4'-DDT							
Hexabromobiphenyl (BP-6)							
Toxaphene							······································
Tetrachloro-m-xylene							
Decachlorobiphenyl							
Affected Samples:							
							·

Date:		5/9	5/9	5/9-	5/10	5/10	5/11
Time:		06:05	14:25	22:45	07:05	15:22	01:09
	initial Cal;	Cont. Cal.	Cont. Cal.	Cont. Cal.	Gont. Cal.	Cont. Cal	Cont. Cal.
<u> </u>	%ASD	%D	%0	%D	%D	% D	%D
2-Bromobiphenyl		ok	ok	ok	ok	ok	ok
3-Bromobiphenyl							
4-Bromobiphenyl					·		
Hexachiorobenzene							
gamma-BHC (Lindane)							
Aldrin							
Heptacior epoxide							
gamma-Chlordane							
alpha-Chiordane							
trans-Nonachior							
4,4'-DDE							
Dieldrin							
4,4'-DDD							
cis-Nonachlor							
4,4'-DDT							
Hexabromobiphenyl (BP-6)							
Toxaphene							
Tetrachloro-m-xylene							
Decachlorobiphenyl							
Affected Samples:							
Γ							
Γ							
<u> </u>							

Corrected Sample Analysis Data Sheets

Phase Type: Biota

Phase Weight: 10.0 g

Extraction: Soxhlet

Dilution Factor: 1.0

Lab Sample ID: 214493

Date Received: 03/20/94

Date Extracted: 03/25/94

Date Analyzed: 05/03/94

Sulfur Clean-up: N

Client ID No.

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	a
2052-07-5	2-Bromobiphenyl	0.010	リナ
2113-57-7	3-Bromobiphenyl	0.010	UJ
92-66-0	4-Bromobiphenyl	0.010	して
118-74-1	Hexachlorobenzene	0.0050	UJ
58-89-9	gamma-BHC	0.0050	U 7
309-00-2	Aldrin	0.0050	しっ
1024-57-3	Heptachlor Epoxide	0.0050	U 7
5103-74-2	gamma-Chlordane	0.0050	υJ
5103-71-9	alpha-Chlordane	0.0050	40
39765-80-5	trans-Nonachlor	0.0050	UJ
72-55-9	4,4'-DDE	0.010	U T
60-57-1	Dieldrin	0.010	リプ
72-54-8	4,4'-DDD	0.010	ΰ
5103-73-1	cis-Nonachlor	0.0050	<u> </u>
50-29-3	4,4'-DDT	0.010	ロア
36355-01-8	Hexabromobiphenyl	0.020	υ 1
8001-35-2	Toxaphene	0.20	U 7

Lab Name: Aquatec, Inc.
Lab Code: AQUAI
Contract: 91082
Case: BIO

Client ID No. K40239R

42799

Phase Type: Biota

Phase Weight: 10.0 g

Extraction: Soxhlet

Dilution Factor: 1.0

 Lab Sample ID:
 214494

 Date Received:
 03/20/94

 Date Extracted:
 03/25/94

 Date Analyzed:
 05/04/94

 Sulfur Clean-up:
 N

SDG:

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	a
2052-07-5	2-Bromobiphenyl	0.010	U 7
2113-57-7	3-Bromobiphenyl	0.010	UJ
92-66-0	4-Bromobiphenyl	0.010	UJ
118-74-1	Hexachlorobenzene	0.0050	UJ
58-89-9	gamma-BHC	0.0050	リナ
309-00-2	Aldrin	0.0050	υ σ
1024-57-3	Heptachlor Epoxide	0.0050	UJ
5103-74-2	gamma-Chlordane	0.0050	U)
5103-71-9	alpha-Chlordane	0.0050	UJ
39765-80-5	trans-Nonachlor	0.0050	リコ
72-55-9	4,4'-DDE	0.037	フ
60-57-1	Dieldrin	0.010	רט
72-54-8	4,4'-DDD	0.010	UT
5103-73-1	cis-Nonachlor	0.0050	UT
50-29-3	4,4'-DDT	0.010	UJ
36355-01-8	Hexabromobiphenyl	0.020	υŋ
8001-35-2	Toxaphene	0.20	UJ

Lab Name: Aquatec, Inc.

Lab Code: AQUAI

Contract: 91082

Case: BIO

K40240F

Client ID No.

SDG: 42799

Phase Type: Biota

Phase Weight: 10.0 g

Extraction: Soxhlet

Dilution Factor: 1.0

Lab Sample ID: 213435
Date Received: 03/09/94
Date Extracted: 03/23/94
Date Analyzed: 04/27/94
Sulfur Clean-up: N

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	ā
2052-07-5	2-Bromobiphenyl	0.010	U
2113-57-7	3-Bromobiphenyl	0.010	U
92-66-0	4-Bromobiphenyl	0.010	U
118-74-1	Hexachlorobenzene	0.0050	U .
58-89-9	gamma-BHC	0.0050	U
309-00-2	Aldrin	0.0050	U
1024-57-3	Heptachlor Epoxide	0.0050	U
5103-74-2	gamma-Chlordane	0.0050	U
5103-71-9	alpha-Chlordane	0.0050	U
39765-80-5	trans-Nonachlor	0.0062	
72-55-9	4,4'-DDE	0.058	
60-57-1	Dieldrin	0.010	U
72-54-8	4,4'-DDD	0.016	
5103-73-1	cis-Nonachlor	0.0050	U
50-29-3	4,4'-DDT	0.010	U
36355-01-8	Hexabromobiphenyl	0.020	U
8001-35-2	Toxaphene	0.20	U

Lab Name: Aquatec, Inc.

Lab Code: AQUAI

Contract: 91082

Case: BIO

Client ID No.
K40240R

42799

Lab Sample ID:

213436 03/09/94 03/23/94

Phase Type: Biota
Phase Weight: 10.0 g
Extraction: Soxhlet
Dilution Factor: 1.0

Date Extracted:

Date Analyzed:

Sulfur Clean-up:

Date Received:

SDG:

04/27/94 N

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	a
2052-07-5	2-Bromobiphenyl	0.13	
2113-57-7	3-Bromobiphenyl	0.010	U
92-66-0	4-Bromobiphenyl	0.010	U
118-74-1	Hexachiorobenzene	0.0050	U
58-89-9	gamma-BHC	0.0050	Ú
309-00-2	Aldrin	0.0050	U
1024-57-3	Heptachlor Epoxide	0.0052	
5103-74-2	gamma-Chiordane	0.0050	Ŭ
5103-71-9	alpha-Chlordane	0.0050	U
39765-80-5	trans-Nonachior	0.010	
72-55-9	4,4'-DDE	0.12	
60-57-1	Dieldrin	0.010	U
72-54-8	4,4'-DDD	0.031	
5103-73-1	cis-Nonachlor	0.0069	
50-29-3	4,4'-DDT	0.010	U
36355-01-8	Hexabromobiphenyl	0.020	Ú
8001-35-2	Toxaphene	0.20	U

Lab Name: Aquatec, Inc.

Lab Code: AQUAI

Contract: 91082

Case: BIO

K40241F

Client ID No.

SDG: 42799

Phase Type: Biota
Phase Weight: 10.0 g
Extraction: Soxhlet
Dilution Factor: 1.0

Lab Sample ID: 213438

Date Received: 03/09/94

Date Extracted: 03/23/94

Date Analyzed: 04/27/94

Sulfur Clean-up: N

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	Q
2052-07-5	2-Bromobiphenyl	0.010	U
2113-57-7	3-Bromobiphenyl	0.010	U
92-66-0	4-Bromobiphenyl	0.010	U
118-74-1	Hexachlorobenzene	0.0050	Ü
58-89-9	gamma-BHC	0.0050	U
309-00-2	Aldrin	0.0050	U
1024-57-3	Heptachlor Epoxide	0.0050	U
5103-74-2	gamma-Chlordane	0.0050	U
5103-71-9	alpha-Chlordane	0.0050	U
39765-80-5	trans-Nonachlor	0.0069	
72-55-9	4,4'-DDE	0.069	
60-57-1	Dieldrin	0.010	U
72-54-8	4,4'-DDD	0.022	
5103-73-1	cis-Nonachlor	0.0050	U
50-29-3	4,4'-DDT	0.010	U
36355-01-8	Hexabromobiphenyl	0.020	U
8001-35-2	Toxaphene	0.20	U

Lab Name: Aquatec, Inc.
Lab Code: AQUAI
Contract: 91082
Case: BIO

Client ID No. K40241R

42799

Phase Type: Biota

Phase Weight: 10.0 g

Extraction: Soxhlet

Dilution Factor: 1.0

 Lab Sample ID:
 213439

 Date Received:
 03/09/94

 Date Extracted:
 03/23/94

 Date Analyzed:
 04/27/94

 Sulfur Clean-up:
 N

SDG:

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	Q
2052-07-5	2-Bromobiphenyl	0.13	
2113-57-7	3-Bromobiphenyl	0.010	U
92-66-0	4-Bromobiphenyl	0.010	U
118-74-1	Hexachiorobenzene	0.0050	U
58-89-9	gamma-BHC	0.0050	U
309-00-2	Aldrin	0.0050	
1024-57-3	Heptachlor Epoxide	0.0070	•
5103-74-2	gamma-Chlordane	0.0050	U
5103-71-9	alpha-Chlordane	0.0050	U
39765-80-5	trans-Nonachior	0.014	
72-55-9	4,4'-DDE	0.14	
60-57-1	Dieldrin	0.010	Ü
72-54-8	4,4'-DDD	0.047	
5103-73-1	cis-Nonachlor	0.0050	U
50 20 3	4,4'-DDT	0.020	F
36355-01-8	Hexabromobiphenyl	0.020	U
8001-35-2	Toxaphene	0.20	U

Lab Name: Aquatec, Inc.

Lab Code: AQUAI

Contract: 91082

Case: BIO

Client ID No. K40242F

42799

Phase Type: Biota

Phase Weight: 10.0 g

Extraction: Soxhlet

Dilution Factor: 1.0

 Lab Sample ID:
 213441

 Date Received:
 03/09/94

 Date Extracted:
 03/23/94

 Date Analyzed:
 04/27/94

 Sulfur Clean-up:
 N

SDG:

			
CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	Q
2052-07-5	2-Bromobiphenyl	0.010	υ
2113-57-7	3-Bromobiphenyl	0.010	U
92-66-0	4-Bromobiphenyl	0.010	U
118-74-1	Hexachlorobenzene	0.0050	U
58-89-9	gamma-BHC	0.0050	U
309-00-2	Aldrin	0.0050	U
1024-57-3	Heptachlor Epoxide	0.0050	U
5103-74-2	gamma-Chlordane	0.0050	U
5103-71-9	alpha-Chlordane	0.0050	U
39765-80-5	trans-Nonachlor	0.0050	U
72-55-9	4,4'-DDE	0.018	
60-57-1	Dieldrin	0.010	U
72-54-8	4,4'-DDD	0.010	U
5103-73-1	cis-Nonachlor	0.0050	U
50-29-3	4,4'-DDT	0.010	U
36355-01-8	Hexabromobiphenyl	0.020	U
8001-35-2	Toxaphene	0.20	U

Lab Name: Aquatec, Inc.

Lab Code: AQUAI

Contract: 91082

Case: BIO

Client ID No.
K40242R

SDG: 42799

Phase Type: Biota

Phase Weight: 10.0 g

Extraction: Soxhlet

Dilution Factor: 1.0

Lab Sample ID: 213442
Date Received: 03/09/94
Date Extracted: 03/23/94
Date Analyzed: 04/27/94
Sulfur Clean-up: N

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	Q
2052-07-5	2-Bromobiphenyl	0.12	
2113-57-7	3-Bromobiphenyl	0.010	U
92-66-0	4-Bromobiphenyl	0.010	U
118-74-1	Hexachiorobenzene	0.0050	U
58-89-9	gamma-BHC	0.0050	U
309-00-2	Aldrin	0.0050	U
1024-57-3	Heptachlor Epoxide	0.0050	U
5103-74-2	gamma-Chlordane	0.0050	U
5103-71-9	alpha-Chlordane	0.0050	U
39765-80-5	trans-Nonachior	0.0061	7
72-55-9	4,4'-DDE	0.074	
60-57-1	Dieldrin	0.010	U
72-54-8	4,4'-DDD	0.022	
5103-73-1	cis-Nonachlor	0.0050	U
50-29-3	4,4'-DDT	0.010	U
36355-01-8	Hexabromobiphenyl	0.020	U
8001-35-2	Toxaphene	0.20	U

Soxhlet

1.0

Extraction:

Dilution Factor:

Lab Name: K40244F Aquatec, Inc. Lab Code: AQUAI Contract: 91082 Case: BIO SDG: 42799 Lab Sample ID: 214496 Phase Type: **Biota Date Received:** 03/20/94 Phase Weight: 10.0 Date Extracted: 03/25/94

Date Analyzed:

Sulfur Clean-up:

Client ID No.

05/04/94

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CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	Q
2052-07-5	2-Bromobiphenyl	0.010	U
2113-57-7	3-Bromobiphenyl	0.010	U
92-66-0	4-Bromobiphenyl	0.010	U
118-74-1	Hexachlorobenzene	0.0050	U
58-89-9	gamma-BHC	0.0050	U
309-00-2	Aldrin	0.0050	U
1024-57-3	Heptachlor Epoxide	0.0050	U
5103-74-2	gamma-Chlordane	0.0050	U
5103-71-9	alpha-Chlordane	0.0050	U
39765-80-5	trans-Nonachlor	0.0050	U
72-55-9	4,4'-DDE	0.030	
60-57-1	Dieldrin	0.010	U
72-54-8	4,4'-DDD	0.010	U
5103-73-1	cis-Nonachlor	0.0050	U
50-29-3	4,4'-DDT	0.010	U
36355-01-8	Hexabromobiphenyl	0.020	U
8001-35-2	Toxaphene	0.20	U

Lab Name: Aquatec, Inc.

Lab Code: AQUAI

Contract: 91082

Case: BIO SDG:

Phase Type: Biota

Phase Weight: 10.0 g

Extraction: Soxhlet

Dilution Factor: 1.0

Lab Sample ID: 214497
Date Received: 03/20/94
Date Extracted: 03/25/94
Date Analyzed: 05/04/94
Sulfur Clean-up: N

Client ID No.

K40244R

42799

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	Q
2052-07-5	2-Bromobiphenyl	0.010	UJ
2113-57-7	3-Bromobiphenyl	0.010	<u> </u>
92-66-0	4-Bromobiphenyl	0.010	U 5
118-74-1	Hexachlorobenzene	0.0050	٦
58-89-9	gamma-BHC	0.0050	リフ
309-00-2	Aldrin	0.0050	77
1024-57-3	Heptachlor Epoxide	0.0050	U.J.
5103-74-2	gamma-Chlordane	0.0050	C.i
5103-71-9	alpha-Chlordane	0.0050	U J
39765-80-5	trans-Nonachlor	0.0050	LU
72-55-9	4,4'-DDE	0.046	7
60-57-1	Dieldrin	0.010	40
72-54-8	4,41-DDD	0.010	Ţ
5103-73-1	cis-Nonachlor	0.0050	UJ
50-29-3	4,4'-DDT	0.010	リケ
36355-01-8	Hexabromobiphenyl	0.020	4
8001-35-2	Toxaphene	0.20	UJ

Lab Name: Aquatec, Inc.

Lab Code: AQUAI

Contract: 91082

Case: BIO

Client ID No. K40245F

SDG: 42799

Phase Type: Biota

Phase Weight: 10.0 g

Extraction: Soxhlet

Dilution Factor: 1.0

 Lab Sample ID:
 213444

 Date Received:
 03/09/94

 Date Extracted:
 03/23/94

 Date Analyzed:
 04/27/94

 Sulfur Clean-up:
 N

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	a
2052-07-5	2-Bromobiphenyl	0.010	U
2113-57-7	3-Bromobiphenyl	0.010	U
92-66-0	4-Bromobiphenyl	0.010	U
118-74-1	Hexachlorobenzene	0.0050	U
58-89-9	gamma-BHC	0.0050	U
309-00-2	Aldrin	0.0050	U
1024-57-3	Heptachlor Epoxide	0.0050	U
5103-74-2	gamma-Chlordane	0.0050	U
5103-71-9	alpha-Chlordane	0.0050	U
39765-80-5	trans-Nonachior	0.0050	U
72-55-9	4,4'-DDE	0.019	
60-57-1	Dieldrin	0.010	U
72-54-8	4,4'-DDD	0.010	U
5103-73-1	cis-Nonachlor	0.0050	U
50-29-3	4,4'-DDT	0.010	U
36355-01-8	Hexabromobiphenyl	0.020	U
8001-35-2	Toxaphene	0.20	U

 Lab Name:
 Aquatec, Inc.
 K40245R

 Lab Code:
 ÂQUAI

 Contract:
 91082

 Case:
 BIO

 SDG:
 42799

 Lab Sample ID:
 213445

Phase Type: Biota
Phase Weight: 10.0 g
Extraction: Soxhlet
Dilution Factor: 1.0

 Lab Sample ID:
 213445

 Date Received:
 03/09/94

 Date Extracted:
 03/23/94

 Date Analyzed:
 04/27/94

 Sulfur Clean-up:
 N

Client ID No.

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	Q
2052-07-5	2-Bromobiphenyl	0.16	
2113-57-7	3-Bromobiphenyl	0.012	7
92-66-0	4-Bromobiphenyl	0.010	U
118-74-1	Hexachlorobenzene	0.0050	U
58-89-9	gamma-BHC	0.0050	U
309-00-2	Aldrin	0.0050	U
1024-57-3	Heptachlor Epoxide	0.0052	
5103-74-2	gamma-Chlordane	0.0050	U
5103-71-9	alpha-Chlordane	0.0050	U
39765-80-5	trans-Nonachlor	0.0092	J
72-55-9	4,4'-DDE	0.091	
60-57-1	Dieldrin	0.010	U
72-54-8	4,4'-DDD	0.023	
5103-73-1	cis-Nonachlor	0.0050	U
50-29-3	4,4' DDT	0.010	U F
36355-01-8	Hexabromobiphenyl	0.020	U
8001-35-2	Toxaphene	0.20	U
50-29-3 36355-01-8	4,4' DDT Hexabromobiphenyl	0.010 0.020	U

 Lab Name:
 Aquatec, Inc.
 K40304F

 Lab Code:
 AQUAI

 Contract:
 91082

 Case:
 BIO

 SDG:
 42799

 Lab Sample ID:
 213447

 hase Type:
 Biota

 Date Received:
 03/09/94

Client ID No.

03/23/94 04/27/94

Biota	Date Received:
10.0 g	Date Extracted:
Soxhlet	Date Analyzed:
1.0	Sulfur Clean-up:
	10.0 g Soxhlet

			-
COMPOUND	CONCENTRATION (mg/Kg)	a	
2-Bromobiphenyl	0.010	U	
3-Bromobiphenyl	0.010	U	
4-Bromobiphenyl	0.010	U	
Hexachlorobenzene	0.0050	U	
gamma-BHC	0.0050	U	
Aldrin	0.026	フ	
Heptachlor Epoxide	0.020		
gamma Chlordane	0.0070		-R
alpha-Chlordane	0.0050	U	
trans-Nonachlor	0.0050	Ū	
4,4'-DDE	0.042		
Dieldrin	0.010	U	
4,4'-DDD	0.010	U	
cis-Nonachlor	0.0090	JN	
4,4' DDT	0.014		-R
Hexabromobiphenyl	0.020	U	
Toxaphene	0.20	U	
	2-Bromobiphenyl 3-Bromobiphenyl 4-Bromobiphenyl Hexachlorobenzene gamma-BHC Aldrin Heptachlor Epoxide gamma Chlordane alpha-Chlordane trans-Nonachlor 4,4'-DDE Dieldrin 4,4'-DDD cis-Nonachlor 4,4'-DBT Hexabromobiphenyl	2-Bromobiphenyl 0.010 3-Bromobiphenyl 0.010 4-Bromobiphenyl 0.010 Hexachlorobenzene 0.0050 gamma-BHC 0.0050 Aldrin 0.026 Heptachlor Epoxide 0.020 gemma-Ghlordane 0.0050 trans-Nonachlor 0.0050 4,4'-DDE 0.042 Dieldrin 0.010 4,4'-DDD 0.010 cis-Nonachlor 0.0090 4,4'-DDT 0.0090 4,4'-DDT 0.0000	Comp/Kg Comp/Kg

Phase Type: Biota
Phase Weight: 10.0 g
Extraction: Soxhlet
Dilution Factor: 1.0

 Lab Sample ID:
 213448

 Date Received:
 03/09/94

 Date Extracted:
 03/23/94

 Date Analyzed:
 04/27/94

 Sulfur Clean-up:
 N

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	a
2052-07-5	2-Bromobiphenyl	0.095	
2113-57-7	3-Bromobiphenyl	0.010	U
92-66-0	4-Bromobiphenyl	0.010	U
118-74-1	Hexachlorobenzene	0.0050	U
58-89-9	gamma-BHC	0.0050	U
309-00-2	Aldrin	0,22 0.14-	TCE X
1024-57-3	Heptachlor Epoxide	0.18 -0.13-	XD
5103-74-2	gamma-Chlordane	0.0050	U
5103-71-9	alpha-Chlordane	0.0050	U
39765-80-5	trans-Nonachlor	0.042	
72-55-9	4,4'-DDE	0.44 0.32	★)
60-57-1	Dieldrin	0.010	U
72-54-8	4,4'-DDD	0.093	
5103-73-1	cis-Nonachlor	0.11 0.092	*)J
50-29-3	4,4'-DDT	0.010	U
36355-01-8	Hexabromobiphenyl	0.020	U
8001-35-2	Toxaphene	0.20	U

Lab Name: Aquatec, Inc.

Lab Code: AQUAI

Contract: 91082

Case: BIO

Client ID No.
K40305F

SDG: 42799

Phase Type: Biota

Phase Weight: 10.0 g

Extraction: Soxhlet

Dilution Factor: 1.0

 Lab Sample ID:
 213450

 Date Received:
 03/09/94

 Date Extracted:
 03/23/94

 Date Analyzed:
 04/27/94

 Sulfur Clean-up:
 N

 		·		7
CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	Q	
2052-07-5	2-Bromobiphenyl	0.010	U	
2113-57-7	3-Bromobiphenyl	0.010	Ü	1
92-66-0	4-Bromobiphenyl	0.010	U]
118-74-1	Hexachlorobenzene	0.0050	U	1
58-89-9	gamma-BHC	0.0050	Ú	1
309-00-2	Aldrin	0.054	JN	
1024-57-3	Heptachlor Epoxide	0.043		
5103 74 2	gamma Chlordane	0.016		R
5103-71-9	alpha-Chiordane	0.0050	U	ľ
39765 89 5	trans Nonachior	0.011		IR
72-55-9	4,4'-DDE	0.10		Ì
60-57-1	Dieldrin	0.010	U	į
72-54-8	4,4'-DDD	0.024	J 12/14	į
5103-73-1	cis-Nonachlor	0.023		İ
50-29-3	4,4'-DDT	0.010	U	İ
36355-01-8	Hexabromobiphenyl	0.020	U	
8001-35-2	Toxaphene	0.20	U	

Lab Name: Aquatec, Inc.
Lab Code: AQUAI
Contract: 91082
Case: BIO

K40305R

Client ID No.

SDG: 42799

Phase Type: Biota
Phase Weight: 10.0 g
Extraction: Soxhlet
Dilution Factor: 1.0

 Lab Sample ID:
 213451

 Date Received:
 03/09/94

 Date Extracted:
 03/23/94

 Date Analyzed:
 04/27/94

 Sulfur Clean-up:
 N

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	Q	
2052-07-5	2-Bromobiphenyl	0.010	U	
2113-57-7	3-Bromobiphenyl	0.010	U	
92-66-0	4-Bromobiphenyl	0.010	U	
118-74-1	Hexachlorobenzene	0.0050	U	
58-89-9	gamma-BHC	0.0050	U	
309-00-2	Aldrin	- 0.10 0.085	X DIN	
1024-57-3	Heptachlor Epoxide	0.078		į
5103-74-2	gamma-Chlordane	0.074		R
5103-71-9	alpha-Chlordane	0.0050	U	ł
39765-80-5	trans-Nonachlor	0.022		R
72-55-9	4,4'-DDE	0.18 -0.17	*D	
60-57-1	Dieldrin	0.010	U	
72-54-8	4,4'-DDD	0.048		1
5103-73-1	cis-Nonachlor	0.036		
50-29-3	4,4'-DDT	0.010	U	ĺ
36355-01-8	Hexabromobiphenyl	0.020	U	
8001-35-2	Toxaphene	0.20	Ü	ĺ
	2052-07-5 2113-57-7 92-66-0 118-74-1 58-89-9 309-00-2 1024-57-3 5103-71-9 39765-80-5 72-55-9 60-57-1 72-54-8 5103-73-1 50-29-3 36355-01-8	2052-07-5 2-Bromobiphenyl 2113-57-7 3-Bromobiphenyl 92-68-0 4-Bromobiphenyl 118-74-1 Hexachlorobenzene 58-89-9 gamma-BHC 309-00-2 Aldrin 1024-57-3 Heptachlor Epoxide 5103-74-2 gamma-Chlordane 5103-71-9 alpha-Chlordane 19765-80-5 72-55-9 4,4'-DDE 60-57-1 Dieldrin 72-54-8 4,4'-DDD 5103-73-1 cis-Nonachlor 50-29-3 4,4'-DDT 36355-01-8 Hexabromobiphenyl	2052-07-5 2-Bromobiphenyl 0.010 2113-57-7 3-Bromobiphenyl 0.010 92-66-0 4-Bromobiphenyl 0.010 118-74-1 Hexachlorobenzene 0.0050 58-89-9 gamma-BHC 0.0050 309-00-2 Aldrin - 0.10 0.085 1024-57-3 Heptachlor Epoxide 0.078 5103-74-2 gamma-Chlordane 0.074 5103-71-9 aipha-Chlordane 0.0050 39765-80-5 trans-Nonachlor 0.022 72-55-9 4,4'-DDE 0.18 0.17 60-57-1 Dieldrin 0.010 72-54-8 4,4'-DDD 0.048 5103-73-1 cis-Nonachlor 0.036 50-29-3 4,4'-DDT 0.010 36355-01-8 Hexabromobiphenyl 0.020	Comp/Kg Comp/Kg

 Lab Name:
 Aquatec, Inc.

 Lab Code:
 AQUAI

 Contract:
 91082

 Case:
 BIO

Client ID No.
K40306F

42799

Phase Type: Biota

Phase Weight: 10.0 g

Extraction: Soxhlet

Dilution Factor: 1.0

 Lab Sample ID:
 213453

 Date Received:
 03/09/94

 Date Extracted:
 03/23/94

 Date Analyzed:
 04/27/94

 Sulfur Clean-up:
 N

SDG:

				_
CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	a	
2052-07-5	2-Bromobiphenyl	0.010	U	
2113-57-7	3-Bromobiphenyl	0.010	U	
92-66-0	4-Bromobiphenyl	0.010	U	ĺ
118-74-1	Hexachlorobenzene	0.0050	Ú	1
58-89-9	gamma-BHC	0.0050	U	
309-00-2	Aldrin	0.013	NC	1
1024-57-3	Heptachlor Epoxide	0.010		
5103 74 2	gamma Chlordane	0.0074		R
5103-71-9	alpha-Chlordane	0.0050	U	`
39765-80-5	trans-Nonachlor	0.0050	U	
72-55-9	4,4'-DDE	0.064		
60-57-1	Dieldrin	0.010	U	
72-54-8	4,4'-DDD	0.010	U	
5103-73-1	cis-Nonachlor	0.0050	U	
50-29-3	4,4'-DDT	0.010	υ	
36355-01-8	Hexabromobiphenyl	0.020	U	
8001-35-2	Toxaphene	0.20	U	i

Lab Name: Aquatec, Inc.

Lab Code: AQUAI

Contract: 91082

Case: BIO

K40306R

Client ID No.

SDG: 42799

Phase Type: Biota

Phase Weight: 10.0 g

Extraction: Soxhlet

Dilution Factor: 1.0

Lab Sample ID: 213454

Date Received: 03/09/94

Date Extracted: 03/23/94

Date Analyzed: 04/27/94

Sulfur Clean-up: N

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	a	
2052-07-5	2-Bromobiphenyl	0.010	U	
2113-57-7	3-Bromobiphenyl	0.010	U	
92-66-0	4-Bromobiphenyi	0.010	Ü	
118-74-1	Hexachlorobenzene	0.0050	U	
58-89-9	gamma-BHC	0.0050	U	
309-00-2	Aldrin	0.041	JN	
1024-57-3	Heptachlor Epoxide	0.036		
5103-74-2	gamma-Chlordane	0.035		R
5103-71-9	alpha-Chlordane	0.0050	U	
39765-80-5	trans-Nonachior	0.0050	U	ı
72-55-9	4,4'-DDE	0:33 -0:30	* D	
60-57-1	Dieldrin	0.010	Ü	
72-54-8	4,4'-DDD	0.021	JE 12114	
5103-73-1	cis-Nonachlor	0.0050	U	
50-29-3	4,4'-DDT	0.010	U	
36355-01-8	Hexabromobiphenyl	0.020	U	
8001-35-2	Toxaphene	0.20	U	

Lab Name: Aquatec, Inc.

Lab Code: AQUAI

Contract: 91082

Case: BIO

Client ID No.
K40308F

42799

Phase Type: Biota

Phase Weight: 10.0 g

Extraction: Soxhlet

Dilution Factor: 1.0

 Lab Sample ID:
 213456

 Date Received:
 03/09/94

 Date Extracted:
 03/23/94

 Date Analyzed:
 04/27/94

 Sulfur Clean-up:
 N

SDG:

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	Q
2052-07-5	2-Bromobiphenyl	0.010	U
2113-57-7	3-Bromobiphenyl	0.010	U
92-66-0	4-Bromobiphenyl	0.010	U
118-74-1	Hexachiorobenzene	0.0050	U
58-89-9	gamma-BHC	0.0050	U
309-00-2	Aldrin	0.041	J
1024-57-3	Heptachlor Epoxide	0.037	
5103-74-2	gamma-Chlordane	0.013	
5103-71-9	alpha-Chlordane	0.0050	U
39765-80-5	trans Nonachlor	0.0095	/
72-55-9	4,4'-DDE	0.081	
60-57-1	Dieldrin	0.010	U
72-54-8	4,4'-DDD	0.019	
5103-73-1	cis-Nonachlor	0.017	<u>J</u>
50-29-3	4,4'-DDT	0.010	U
36355-01-8	Hexabromobiphenyl	0.020	Ū
8001-35-2	Toxaphene	0.20	U

Lab Name: Aquatec, Inc.
Lab Code: AQUAI
Contract: 91082
Case: BIO

Client ID No. K40308R

SDG: 42799

Phase Type: Biota

Phase Weight: 10.0 g

Extraction: Soxhlet

Dilution Factor: 1.0

Lab Sample ID: 213457
Date Received: 03/09/94
Date Extracted: 03/23/94
Date Analyzed: 04/27/94
Sulfur Clean-up: N

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Lab Name: Aquatec, Inc.

Lab Code: AQUAI

Contract: 91082

Case: BIO

K40309F

Client ID No.

SDG: 42799

Phase Type: Biota

Phase Weight: 10.0 g

Extraction: Soxhlet

Dilution Factor: 1.0

Lab Sample ID: 213459
Date Received: 03/09/94
Date Extracted: 03/23/94
Date Analyzed: 04/27/94
Sulfur Clean-up: N

COMPOUND	CONCENTRATION (mg/Kg)	Q
2-Bromobiphenyl	0.010	U
3-Bromobiphenyl	0.010	U
4-Bromobiphenyl	0.010	U
Hexachlorobenzene	0.0050	· U
gamma-BHC	0.0050	U
Aldrin	0.023	7
Heptachlor Epoxide	0.017	
gamma Chiordane	0.010	
aipha-Chiordane	0.0050	U
trans-Nonachior	0.0060	7
4,4'-DDE	0.054	4
Dieldrin	0.010	U
4,4'-DDD	0.010	U
cis-Nonachlor	0.013	J
4,4'-DDT	0.010	U
Hexabromobiphenyl	0.020	U
Toxaphene	0.20	U
	2-Bromobiphenyl 3-Bromobiphenyl 4-Bromobiphenyl Hexachlorobenzene gamma-BHC Aldrin Heptachlor Epoxide gamma-Chlordane alpha-Chlordane trans-Nonachlor 4,4'-DDE Dieldrin 4,4'-DDD cis-Nonachlor 4,4'-DDT Hexabromobiphenyl	(mg/Kg)

Lab Name: Aquatec, Inc.

Lab Code: AQUAI

Contract: 91082

Case: BIO

Client ID No. K40309R

SDG: 42799

Phase Type: Biota

Phase Weight: 10.0 g

Extraction: Soxhlet

Dilution Factor: 1.0

Lab Sample ID: 213460

Date Received: 03/09/94

Date Extracted: 03/23/94

Date Analyzed: 04/27/94

Sulfur Clean-up: N

COMPOUND	CONCENTRATION (mg/Kg)	a	
2-Bromobiphenyl	0.010	U	
3-Bromobiphenyl	0.010	U	
4-Bromobiphenyl	0.010	U	l
Hexachlorobenzene	0.0050	U	
gamma-BHC	0.0050	U	
Aldrin	0.079	JN	
Heptachlor Epoxide	0.066		
gamma Chlordane	0.044		IR
alpha-Chlordane	0.0050	U	
trans Nonachlor	0.030		R
4,4'-DDE	0,30 0.27	-* D	
Dieldrin	0.010	Ū	
4,4'-DDD	0.042		
cis-Nonachlor	0.072	J -	
4,4'-DDT	0.010	U	
Hexabromobiphenyl	0.020	U	
Toxaphene	0.20	U	
	2-Bromobiphenyl 3-Bromobiphenyl 4-Bromobiphenyl Hexachlorobenzene gamma-BHC Aldrin Heptachlor Epoxide gemma-Chlordane alpha-Chlordane trans Nonachlor 4,4'-DDE Dieldrin 4,4'-DDD cis-Nonachlor 4,4'-DDT Hexabromobiphenyl	2-Bromobiphenyl 0.010 3-Bromobiphenyl 0.010 4-Bromobiphenyl 0.010 Hexachlorobenzene 0.0050 gamma-BHC 0.0050 Aldrin 0.079 Heptachlor Epoxide 0.066 gamma-Chlordane 0.0050 trans-Nonsehlor 0.030 4,4'-DDE 0,30 0.27 Dieldrin 0.010 4,4'-DDD 0.042 cis-Nonachlor 0.072 4,4'-DDT 0.010 Hexabromobiphenyl 0.020	Comp/Kg Comp/Kg

Lab Name: Aquatec, Inc. Lab Code: IAUDA Contract: 91082 BIO Case:

Client ID No. K40310F

42799

Phase Type: **Biota** Phase Weight: 10.0 Extraction: Soxhlet Dilution Factor: 1.0

Lab Sample ID: 213462 Date Received: 03/09/94 03/23/94 Date Extracted: 04/27/94 Date Analyzed: Sulfur Clean-up: N

SDG:

	CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	a	
	2052-07-5	2-Bromobiphenyl	0.010	U	
Γ	2113-57-7	3-Bromobiphenyl	0.010	U	
	92-66-0	4-Bromobiphenyl	0.010	U	
	118-74-1	Hexachiorobenzene	0.0050	U	
	58-89-9	gamma-BHC	0.0050	U	
	309-00-2	Aldrin	0.036	4	
	1024-57-3	Heptachlor Epoxide	0.029		
F	5103-74-2	gemma Chlordane	0.011		R
Ī	5103-71-9	alpha-Chlordane	0.0050	U	
	39765-80-5	trans-Nonachior	0.0050	U	
	72-55-9	4,4'-DDE	0.057	 	
	60-57-1	Dieldrin	0.010	U	
	72-54-8	4,4'-DDD	0.014		
	5103-73-1	cis-Nonachlor	0.013	7	
	50-29-3	4,4'-DDT	0.010	U	
	36355-01-8	Hexabromobiphenyl	0.020	U	
	8001-35-2	Toxaphene	0.20	U	

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 Lab Name:
 Aquatec, Inc.
 K40310R

 Lab Code:
 AQUAI

 Contract:
 91082

 Case:
 BIO

 SDG:
 42799

 Lab Sample ID:
 213463

 hase Type:
 Biota
 Date Received:
 03/09/94

Client ID No.

Phase Type:	Biota	Date Received:	03/09/94
Phase Weight:	10.0 g	Date Extracted:	03/23/94
Extraction:	Soxhlet	Date Analyzed:	04/27/94
Dilution Factor:	1.0	Sulfur Clean-up:	N

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	α	
2052-07-5	2-Bromobiphenyl	0.010	U	
2113-57-7	3-Bromobiphenyl	0.010	U	
92-66-0	4-Bromobiphenyl	0.010	U	i
118-74-1	Hexachlorobenzene	0.0050	U	
58-89-9	gamma-BHC	0.0050	U	
309-00-2	Aldrin	U,12-0.11	* DJ	
1024-57-3	Heptachlor Epoxide	0.11 0.10	* D	
5103-74-2	gamma-Chlordane	0.038		R
5103-71-9	alpha-Chlordane	0.0050	U	
39765-80-5	trans-Nonachlor	0.030		R
72-55-9	4,4'-DDE	0,23 0.21	* ⊅	
60-57-1	Dieldrin	0.010	U	
72-54-8	4,4'-DDD	0.061		
5103-73-1	cis-Nonachlor	0.051		
50-29-3	4,4'-DDT	0.010	U	
36355-01-8	Hexabromobiphenyl	0.020	U	
8001-35-2	Toxaphene	0.20	U	

Lab Name: Aquatec, Inc.

Lab Code: AQUAI

Contract: 91082

Case: BIO

K40318F

Client ID No.

SDG: 42799

Phase Type: Biota

Phase Weight: 10.0 g

Extraction: Soxhlet

Dilution Factor: 1.0

 Lab Sample ID:
 213465

 Date Received:
 03/09/94

 Date Extracted:
 03/23/94

 Date Analyzed:
 04/27/94

 Sulfur Clean-up:
 N

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	a
2052-07-5	2-Bromobiphenyl	0.010	U
2113-57-7	3-Bromobiphenyl	0.010	U
92-66-0	4-Bromobiphenyl	0.010	U
118-74-1	Hexachlorobenzene	0.0050	U
58-89-9	gamma-BHC	0.0050	U
309-00-2	Aldrin	0.034	74
1024-57-3	Heptachlor Epoxide	0.013	
5103-74-2	gamma-Chlordane	0.018	77
5103-71-9	alpha-Chlordane	0.0050	U
39765-80-5	trans-Nonachlor	0.0050	U
72-55-9	4,4'-DDE	0.15	
60-57-1	Dieldrin	0.010	U
72-54-8	4,4'-DDD	0.022	
5103-73-1	cis-Nonachlor	0.0050	U
50-29-3	4,4'-DDT	0.010	U
36355-01-8	Hexabromobiphenyl	0.020	U
8001-35-2	Toxaphene	0.20	U

Lab Name: Aquatec, Inc.

Lab Code: AQUAI

Contract: 91082

Case: BIO

Client ID No. K40318R

42799

Phase Type: Biota

Phase Weight: 10.0 g

Extraction: Soxhlet

Dilution Factor: 1.0

 Lab Sample ID:
 213466

 Date Received:
 03/09/94

 Date Extracted:
 03/23/94

 Date Analyzed:
 04/27/94

 Sulfur Clean-up:
 N

SDG:

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	Q
2052-07-5	2-Bromobiphenyl	0.010	U
2113-57-7	3-Bromobiphenyl	0.010	ر
92-66-0	4-Bromobiphenyl	. 0.010	J
118-74-1	Hexachiorobenzene	0.0050	د
58-89-9	gamma-BHC	0.0050	٦
309-00-2	Aldrin	0.031	Ь
1024-57-3	Heptachlor Epoxide	0.011	1717
5103-74-2	gamma-Chlordane	0.017	1N
5103-71-9	alpha-Chlordane	0.0050	U
39765-80-5	trans-Nonachlor	0.0050	U
72-55-9	4,4'-DDE	0.13	
60-57-1	Dieldrin	0.010	U
72-54-8	4,4'-DDD	0.021	
5103-73-1	cis-Nonachlor	0.0050	Ú
50-29-3	4,4'-DDT	0.010	U
36355-01-8	Hexabromobiphenyl	0.020	U
8001-35-2	Toxaphene	0.20	U

Lab Name: Aquatec, Inc.

Lab Code: AQUAI

Contract: 91082

Case: BIO

Client ID No. K40319F

SDG: 42799

Phase Type: Biota

Phase Weight: 10.0 g

Extraction: Soxhlet

Dilution Factor: 1.0

Lab Sample ID: 213468
Date Received: 03/09/94
Date Extracted: 03/23/94
Date Analyzed: 04/27/94
Sulfur Clean-up: N

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	a
2052-07-5	2-Bromobiphenyl	0.010	U
2113-57-7	3-Bromobiphenyl	0.010	U
92-66-0	4-Bromobiphenyl	0.010	U
118-74-1	Hexachiorobenzene	0.0050	U
58-89-9	gamma-BHC	0.0050	U
309-00-2	Aldrin	0.036	c.]
1024-57-3	Heptachlor Epoxide	0.018	
5103-74-2	gamma-Chlordane	0.013	77
5103-71-9	alpha-Chlordane	0.0050	U
39765-80-5	trans-Nonachior	0.0050	U
72-55-9	4,4'-DDE	0.054	7
60-57-1	Dieldrin	0.010	U
72-54-8	4,4'-DDD	0.011	
5103-73-1	cis-Nonachlor	0.0050	U
50-29-3	4,4'-DDT	0.010	U
36355-01-8	Hexabromobiphenyl	0.020	U
8001-35-2	Toxaphene	0.20	U

Lab Name: Aquatec, Inc.
Lab Code: AQUAI
Contract: 91082
Case: BIO

Client ID No. K40319R

42799

Phase Type: Biota

Phase Weight: 10.0 g

Extraction: Soxhlet

Dilution Factor: 1.0

Lab Sample ID: 213469
Date Received: 03/09/94
Date Extracted: 03/23/94
Date Analyzed: 04/27/94
Sulfur Clean-up: N

SDG:

				_
CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	Q	
2052-07-5	2-Bromobiphenyl	0.010	U	
2113-57-7	3-Bromobiphenyl	0.010	U)
92-66-0	4-Bromobiphenyl	0.010	U	1
118-74-1	Hexachlorobenzene	0.0050	U	ĺ
58-89-9	gamma-BHC	0.0050	U	l
309-00-2	Aldrin	0.10 0.086	* DJ	l
1024-57-3	Heptachlor Epoxide	0.051		
5103-74-2	gamma Chlordane	0.035		1R
5103-71-9	alpha-Chlordane	0.0050	U	
39765-80-5	trans-Nonachior	0.0050	J	
72-55-9	4,4'-DDE	0.16		
60-57-1	Dieldrin	0.010	S	l
72-54-8	4,4'-DDD	0.039		
5103-73-1	cis-Nonachlor	0.037	7	
50-29-3	4,4'-DDT	0.010	U	
36355-01-8	Hexabromobiphenyl	0.020	U	
8001-35-2	Toxaphene	0.20	U	

 Lab Name:
 Aquatec, inc.

 Lab Code:
 AQUAI

 Contract:
 91082

 Case:
 BIO

Client ID No.
K40320F

SDG: 42799

Phase Type: Biota
Phase Weight: 10.0 g
Extraction: Soxhlet
Dilution Factor: 1.0

Lab Sample ID: 213471
Date Received: 03/09/94
Date Extracted: 03/23/94
Date Analyzed: 04/28/94
Sulfur Clean-up: N

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	Q	j
2052-07-5	2-Bromobiphenyl	0.010	пĵ	
2113-57-7	3-Bromobiphenyl	0.010	υJ	1
92-66-0	4-Bromobiphenyl	0.010	ر د	
118-74-1	Hexachlorobenzene	0.0050	ر ر	
58-89-9	gamma-BHC	0.0050	ロコ	
309-00-2	Aldrin	0.037	7	
1024-57-3	Heptachlor Epoxide	0.017	5	
5103 74-2	gamma Chlordane	0.0077		R
5103-71-9	alpha-Chlordane	0.0050	UJ	
39765-80-5	trans-Nonachior	0.0050	U.T	
72-55-9	4,4'-DDE	0.031	\mathcal{J}	
60-57-1	Dieldrin	0.010	リナ	
72-54-8	4,4'-DDD	0.013	J	
5103-73-1	cis-Nonachlor	0.0080	<u> </u>	
50-29-3	4,4'-DDT	0.010	UJ	
36355-01-8	Hexabromobiphenyl	0.020	U 7	
8001-35-2	Toxaphene	0.20	υJ	

 Lab Name:
 Aquatec, Inc.
 K40320R

 Lab Code:
 AQUAI

 Contract:
 91082

 Case:
 BIO

 SDG:
 42799

 Lab Sample ID:
 213472

 hase Type:
 Biota
 Date Received:
 03/09/94

Date Extracted:

Date Analyzed:

Sulfur Clean-up:

Client ID No.

03/23/94

04/28/94

N

Phase Type:	Biota	
Phase Weight:	10.0 g	_
Extraction:	Soxhlet	_
Dilution Factor:	1.0	_

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	Q	
2052-07-5	2-Bromobiphenyl	0.010	U	7
2113-57-7	3-Bromobiphenyl	0.010	U	7
92-66-0	4-Bromobiphenyl	0.010	U	7
118-74-1	Hexachlorobenzene	0.0050	U	7
58-89-9	gamma-BHC	0.0050	U	7
309-00-2	Aldrin	0.13 -0.11	-X- D	
1024-57-3	Heptachlor Epoxide	0.067		
5103-74-2	gamma Chlordane	0.029		76
5103-71-9	alpha-Chlordane	0.021		7
39765-80-5	trans-Nonachior	0.0050	U	
72-55-9	4,4'-DDE	0.013		
60-57-1	Dieldrin	0.010	U	
72-54-8	4,4'-DDD	0.061		7
5103-73-1	cis-Nonachlor	0.034		7
50-29-3	4,4'-DDT	0.010	U	7
36355-01-8	Hexabromobiphenyl	0.020	U	7
8001-35-2	Toxaphene	0.20	U	7

Lab Name: Aquatec, Inc.

Lab Code: AQUAI

Contract: 91082

Case: BIO

Client ID No.
K40321F

SDG: 42799

Phase Type: Biota

Phase Weight: 10.0 g

Extraction: Soxhlet

Dilution Factor: 1.0

Lab Sample ID: 213474

Date Received: 03/09/94

Date Extracted: 03/23/94

Date Analyzed: 04/28/94

Sulfur Clean-up: N

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	Q	
2052-07-5	2-Bromobiphenyl	0.010	υ	1
2113-57-7	3-Bromobiphenyl	0.010	U	l
92-66-0	4-Bromobiphenyl	0.010	U	i
118-74-1	Hexachlorobenzene	0.0050	Ū	
58-89-9	gamma-BHC	0.0050	U	•
309-00-2	Aldrin	0.26 0.18	*D	
1024-57-3	Heptachlor Epoxide	0.092	כן	_
5103-74-2	gamma-Chlordane	0.048		R
5103-71-9	alpha-Chlordane	0.028		
39765-80-5	trans-Nonachlor	0.02 0.027	UD	
72-55-9	4,4'-DDE	0.13	J	
60-57-1	Dieldrin	0.010	Ú	
72-54-8	4,4'-DDD	0.076		
5103-73-1	cis-Nonachlor	0.040		
50-29-3	4,4'-DDT	0.010	U	
36355-01-8	Hexabromobiphenyl	0.020	Ú	
8001-35-2	Toxaphene	0.20	U	

Lab Name: Aquatec, Inc.

Lab Code: AQUAI

Contract: 91082

Case: BIO

Client ID No. K40321R

SDG: 42799

Phase Type: Biota
Phase Weight: 10.0 g
Extraction: Soxhlet
Dilution Factor: 2.0

Lab Sample ID: 213475

Date Received: 03/09/94

Date Extracted: 03/23/94

Date Analyzed: 04/28/94

Sulfur Clean-up: N

				-
CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	a	
2052-07-5	2-Bromobiphenyl	0.020	U	
2113-57-7	3-Bromobiphenyl	0.020	U	
92-66-0	4-Bromobiphenyl	0.020	U	1
118-74-1	Hexachlorobenzene	0.010	U	1
58-89-9	gamma-BHC	0.010	U	1
309-00-2	Aldrin	0.39 0.25	* DJ	
1024-57-3	Heptachlor Epoxide	0.17 -0.13	* DJ	
5103-74-2	gamma-Chlordane-	0.070		R
5103-71-9	alpha-Chlordane	0.045		
39765-80-5	trans-Nonachlor	0.050 0.041	UD	
72-55-9	4,4'-DDE	6,22 0.18	*2	
60-57-1	Dieldrin	0.020	U	
72-54-8	4,4'-DDD	0.12		
5103-73-1	cis-Nonachlor	0.054]
50-29-3	4,4'-DDT	0.020	U	1
36355-01-8	Hexabromobiphenyl	0.040	U]
8001-35-2	Toxaphene	0.40	υ	

Lab Name: Aquatec, Inc. Lab Code: IAUDA Contract: 91082 Case: BIO

Phase Type:

Extraction:

Phase Weight:

Dilution Factor:

Client ID No. K40326F

42799

213477

Lab Sample ID:

Biota

Soxhlet

2.0

10.0

Date Received: Date Extracted: Date Analyzed:

03/09/94 03/23/94 04/28/94

Sulfur Clean-up:

SDG:

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	Q
2052-07-5	2-Bromobiphenyl	0.010	U
2113-57-7	3-Bromobiphenyl	0.010	U
92-66-0	4-Bromobiphenyl	0.010	U
118-74-1	Hexachlorobenzene	0.0050	U
58-89-9	gamma-BHC	0.0050	U
309-00-2	Aldrin	0.066	JN
1024-57-3	Heptachior Epoxide	0.032	
5103 74 2	gamma Chlordane	0.034	
5103-71-9	alpha-Chlordane	0.0050	U
39765-80-5	trans-Nonachlor	0,010 0.026	WD
72-55-9	4,4'-DDE	0.19 0.18	* 2
60-57-1	Dieldrin	0.010	U
72-54-8	4,4'-DDD	0.047	
5103-73-1	cis-Nonachlor	0.057	
50-29-3	4,4'-DDT	0.010	U
36355-01-8	Hexabromobiphenyl	0.020	U
8001-35-2	Toxaphene	0.20	U

Lab Name: Aquatec, Inc.

Lab Code: AQUAI

Contract: 91082

Case: BIO

Client ID No. K40326R

SDG: 42799

Phase Type: Biota

Phase Weight: 10.0 g

Extraction: Soxhlet

Dilution Factor: 1.0

Lab Sample ID: 213478

Date Received: 03/09/94

Date Extracted: 03/23/94

Date Analyzed: 04/28/94

Sulfur Clean-up: N

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	Q	
2052-07-5	2-Bromobiphenyl	0.010	07	
2113-57-7	3-Bromobiphenyl	0.010	<u>U J</u>	
92-66-0	4-Bromobiphenyl	0.010	<u>U J</u>	
118-74-1	Hexachlorobenzene	0.0050		
58-89-9	gamma-BHC	0.0050	<u> </u>	
309-00-2	Aldrin	0.049	JN	
1024-57-3	Heptachlor Epoxide	0.020	<u> </u>	
5103-74-2	gamma-Chiordane	0.025	JN	
5103-71-9	alpha-Chlordane	0.0050	U-7	
39765-80-5	trans-Nonachior	0.018		2
72-55-9	4,4'-DDE	0.13	J	
60-57-1	Dieldrin	0.010	UJ	
72-54-8	4,4'-DDD	0.031	5	
5103-73-1	cis-Nonachlor	0.038	:5	
50-29-3	4,4'-DDT	0.010	UJ	
36355-01-8	Hexabromobiphenyl	0.020	UJ	
8001-35-2	Toxaphene	0.20	03	

2.0

Dilution Factor:

Client ID No. Lab Name: K40327F Aquatec, Inc. Lab Code: AQUAI Contract: 91082 Case: BIO SDG: 42799 Lab Sample ID: 213480 Phase Type: **Date Received: Biota** 03/09/94 Phase Weight: 10.0 Date Extracted: 03/23/94 Extraction: Soxhlet Date Analyzed: 04/28/94

Sulfur Clean-up:

N

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	a
2052-07-5	2-Bromobiphenyl	0.010	U
2113-57-7	3-Bromobiphenyl	0.010	U
92-66-0	4-Bromobiphenyl	0.010	U
118-74-1	Hexachlorobenzene	0.0050	U
58-89-9	gamma-BHC	0.0050	U
309-00-2	Aldrin	0,15 0.13	* 72
1024-57-3	Heptachlor Epoxide	0.052	7
5103-74-2	gamma-Chlordane	0.049	NT
5103-71-9	alpha-Chlordane	0.024	
39765-80-5	trans-Nonachlor	0,010 -0.037-	UD
72-55-9	4,4'-DDE	0,21 0.19	トイキ
60-57-1	Dieldrin	0.010	U
72-54-8	4,4'-DDD	0.091	
5103-73-1	cis-Nonachlor	0.056	
50-29-3	4,4'-DDT	0.010	U
36355-01-8	Hexabromobiphenyl	0.020	U
8001-35-2	Toxaphene	0.20	U

 Lab Name:
 Aquatec, Inc.

 Lab Code:
 AQUAI

 Contract:
 91082

 Case:
 BIO

 SDG:

Phase Type: Biota

Phase Weight: 10.0 g

Extraction: Soxhlet

Dilution Factor: 2.0

 Lab Sample ID:
 213481

 Date Received:
 03/09/94

 Date Extracted:
 03/23/94

 Date Analyzed:
 04/28/94

 Sulfur Clean-up:
 N

Client ID No.

K40327R

42799

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	ā
2052-07-5	2-Bromobiphenyl	0.010	U
2113-57-7	3-Bromobiphenyl	0.010	U
92-66-0	4-Bromobiphenyl	0.010	U
118-74-1	Hexachlorobenzene	0.0050	U
58-89-9	gamma-BHC	0.0050	U
309-00-2	Aldrin	0.27 0.17	トの・
1024-57-3	Heptachlor Epoxide	0.0050	U
5103-74-2	gamma-Chlordane	0.071	JN
5103-71-9	alpha-Chlordane	0.037	
39765-80-5	trans-Nonachlor	0.020-0.055	UD
72-55-9	4,4'-DDE	0,35 -0.27	* DJ
60-57-1	Dieldrin	0.010	U
72-54-8	4,4'-DDD	0.14	
5103-73-1	cis-Nonachlor	0.079	
50-29-3	4,4'-DDT	0.010	U
36355-01-8	Hexabromobiphenyl	0.020	U
8001-35-2	Toxaphene	0.20	U

Lab Name: Aquatec, Inc.

Lab Code: AQUAI

Contract: 91082

Case: BIO

Client ID No. K40421F

SDG: 42799

Phase Type: Biota

Phase Weight: 10.0 g

Extraction: Soxhlet

Dilution Factor: 1.0

 Lab Sample ID:
 213483

 Date Received:
 03/09/94

 Date Extracted:
 03/23/94

 Date Analyzed:
 04/28/94

 Sulfur Clean-up:
 N

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	Q
2052-07-5	2-Bromobiphenyl	0.010	U
2113-57-7	3-Bromobiphenyl	0.010	U
92-66-0	4-Bromobiphenyl	0.010	U
118-74-1	Hexachlorobenzene	0.0050	U
58-89-9	gamma-BHC	0.0050	U
309-00-2	Aldrin	0.0050	U
1024-57-3	Heptachlor Epoxide	0.0050	U
5103-74-2	gamma-Chlordane	0.0050	U
5103-71-9	alpha-Chlordane	0.0050	υ
39765-80-5	trans-Nonachior	0.0050	U
72-55-9	4,4'-DDE	0.0091	
60-57-1	Dieldrin	0.010	U
72-54-8	4,4'-DDD	0.010	U
5103-73-1	cis-Nonachlor	0.0050	U
50-29-3	4,4'-DDT	0.010	U
36355-01-8	Hexabromobiphenyl	0.020	U
8001-35-2	Toxaphene	0.20	U

Lab Name: Aquatec, Inc.
Lab Code: AQUAI
Contract: 91082
Case: BIO

K40421R

42799

Client ID No.

Phase Type: Biota

Phase Weight: 10.0 g

Extraction: Soxhlet

Dilution Factor: 1.0

 Lab Sample ID:
 213484

 Date Received:
 03/09/94

 Date Extracted:
 03/23/94

 Date Analyzed:
 04/28/94

 Sulfur Clean-up:
 N

SDG:

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	a
2052-07-5	2-Bromobiphenyl	0.010	U
2113-57-7	3-Bromobiphenyl	0.010	U
92-66-0	4-Bromobiphenyl	0.010	U
118-74-1	Hexachlorobenzene	0.0050	U
58-89-9	gamma-BHC	0.0050	Ú
309-00-2	Aldrin	0.0050	ט
1024-57-3	Heptachlor Epoxide	0.0050	U
5103-74-2	gamma-Chlordane	0.0050	U
5103-71-9	alpha-Chlordane	0.0050	כ
39765-80-5	trans-Nonachior	0.0050	U
72-55-9	4,4'-DDE	0.019	
60-57-1	Dieldrin	0.010	U
72-54-8	4,4'-DDD	0.010	U
5103-73-1	cis-Nonachlor	0.0050	U
50-29-3	4,4'-DDT	0.010	U
36355-01-8	Hexabromobiphenyl	0.020	U
8001-35-2	Toxaphene	0.20	U

Lab Name: Aquatec, Inc.
Lab Code: AQUAI
Contract: 91082
Case: BIO

Client ID No.
K40422F

SDG: 42799

Phase Type: Biota
Phase Weight: 10.0 g
Extraction: Soxhlet
Dilution Factor: 1.0

 Lab Sample ID:
 213486

 Date Received:
 03/09/94

 Date Extracted:
 03/23/94

 Date Analyzed:
 04/28/94

 Sulfur Clean-up:
 N

COMPOUND	CONCENTRATION (mg/Kg)	Q
2-Bromobiphenyl	0.010	U
3-Bromobiphenyl	0.010	U
4-Bromobiphenyl	0.010	U
Hexachlorobenzene	0.0050	U
gamma-BHC	0.0050	U
Aldrin	0.0050	U
Heptachlor Epoxide	0.0050	U
gamma-Chlordane	0.0050	U
alpha-Chlordane	0.0050	U
trans-Nonachlor	0.0050	U
4,4'-DDE	0.017	
Dieldrin	0.010	U
4,4'-DDD	0.010	U
cis-Nonachlor	0.0050	U
4,4'-DDT	0.010	υ
Hexabromobiphenyl	0.020	U
Toxaphene	0.20	U
	2-Bromobiphenyl 3-Bromobiphenyl 4-Bromobiphenyl Hexachlorobenzene gamma-BHC Aldrin Heptachlor Epoxide gamma-Chlordane alpha-Chlordane trans-Nonachlor 4,4'-DDE Dieldrin 4,4'-DDD cis-Nonachlor 4,4'-DDT Hexabromobiphenyl	2-Bromobiphenyl 0.010 3-Bromobiphenyl 0.010 4-Bromobiphenyl 0.010 Hexachlorobenzene 0.0050 gamma-BHC 0.0050 Aldrin 0.0050 Heptachlor Epoxide 0.0050 gamma-Chlordane 0.0050 alpha-Chlordane 0.0050 trans-Nonachlor 0.0050 4,4'-DDE 0.017 Dieldrin 0.010 4,4'-DDD 0.010 cis-Nonachlor 0.0050 4,4'-DDT 0.010 Hexabromobiphenyl 0.020

Lab Name: Aquatec, Inc.
Lab Code: AQUAI
Contract: 91082
Case: BIO

Client ID No.
K40422R

SDG: 42799

Phase Type: Biota

Phase Weight: 10.0 g

Extraction: Soxhlet

Dilution Factor: 1.0

 Lab Sample ID:
 213487

 Date Received:
 03/09/94

 Date Extracted:
 03/23/94

 Date Analyzed:
 04/28/94

 Sulfur Clean-up:
 N

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	Q
2052-07-5	2-Bromobiphenyl	0.010	U
2113-57-7	3-Bromobiphenyl	0.010	U
92-66-0	4-Bromobiphenyl	0.010	U
118-74-1	Hexachlorobenzene	0.0050	U
58-89-9	gamma-BHC	0.0050	U
309-00-2	Aldrin	0.0050	U
1024-57-3	Heptachlor Epoxide	0.0050	U
5103-74-2	gamma-Chlordane	0.0050	U
5103-71-9	alpha-Chlordane	0.0050	U
39765-80-5	trans-Nonachior	0.0050	U
72-55-9	4,4'-DDE	0.031	
60-57-1	Dieldrin	0.010	U
72-54-8	4,4'-DDD	0.014	
5103-73-1	cis-Nonachlor	0.0050	U
50-29-3	4,4'-DDT	0.010	U
36355-01-8	Hexabromobiphenyl	0.020	U
8001-35-2	Toxaphene	0.20	U

Lab Name: Aquatec, Inc.

Lab Code: AQUAI

Contract: 91082

Case: BIO

Client ID No. 4 K40Z23F

SDG: 42799

Phase Type: Biota
Phase Weight: 10.0 g
Extraction: Soxhlet
Dilution Factor: 1.0

Lab Sample ID: 214490
Date Received: 03/20/94
Date Extracted: 03/25/94
Date Analyzed: 05/03/94
Sulfur Clean-up: N

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	a
2052-07-5	2-Bromobiphenyl	0.010	UJ
2113-57-7	3-Bromobiphenyl	0.010	U
92-66-0	4-Bromobiphenyl	0.010	د دا
118-74-1	Hexachlorobenzene	0.0050	כן
58-89-9	gamma-BHC	0.0050	して
309-00-2	Aldrin	0.0050	ر ر
1024-57-3	Heptachlor Epoxide	0.0050	D.J
5103-74-2	gamma-Chlordane	0.0050	C U
5103-71-9	alpha-Chlordane	0.0050	U
39765-80-5	trans-Nonachlor	0.0050	U)
72-55-9	4,4'-DDE	0.023	コ
60-57-1	Dieldrin	0.010	U 7
72-54-8	4,4'-DDD	0.010	7
5103-73-1	cis-Nonachlor	0.0050	U - ,
50-29-3	4,4'-DDT	0.010	UT
36355-01-8	Hexabromobiphenyl	0.020	UT
8001-35-2	Toxaphene	0.20	UJ

Lab Name: Aquatec, Inc.
Lab Code: AQUAI
Contract: 91082
Case: BIO

Client ID No.

SDG: 42799

Phase Type: Biota

Phase Weight: 10.0 g

Extraction: Soxhlet

Dilution Factor: 1.0

 Lab Sample ID:
 214491

 Date Received:
 03/20/94

 Date Extracted:
 03/25/94

 Date Analyzed:
 05/03/94

 Sulfur Clean-up:
 N

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	a
2052-07-5	2-Bromobiphenyl	0.071	J
2113-57-7	3-Bromobiphenyl	0.010	υ 7
92-66-0	4-Bromobiphenyl	0.010	C (-
118-74-1	Hexachlorobenzene	0.0050	し ぐ
58-89-9	gamma-BHC	0.0050	りつ
309-00-2	Aldrin	0.0050	רו
1024-57-3	Heptachlor Epoxide	0.0050	ا ا
5103-74-2	gamma-Chlordane	0.0050	را را
5103-71-9	alpha-Chlordane	0.0050	J-
39765-80-5	trans-Nonachlor	0.0050	Uフ
72-55-9	4,4'-DDE	0.035	15
60-57-1	Dieldrin	0.010	Ę,
72-54-8	4,4'-DDD	0.010	υ 1
5103-73-1	cis-Nonachlor	0.0050	U
50-29-3	4,4'-DDT	0.010	U —
36355-01-8	Hexabromobiphenyl	0.020	リー
8001-35-2	Toxaphene	0.20	UŠ

Lab Name: Aquatec, Inc.

Lab Code: AQUAI

Contract: 91082

Case: BIO

Client ID No. K40427F

SDG: 42799

Phase Type: Biota

Phase Weight: 10.0 g

Extraction: Soxhlet

Dilution Factor: 1.0

 Lab Sample ID:
 213489

 Date Received:
 03/09/94

 Date Extracted:
 03/23/94

 Date Analyzed:
 04/28/94

 Sulfur Clean-up:
 N

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	a
2052-07-5	2-Bromobiphenyl	0.010	υ
2113-57-7	3-Bromobiphenyl	0.010	U
92-66-0	4-Bromobiphenyl	0.010	U
118-74-1	Hexachlorobenzene	0.0050	U
58-89-9	gamma-BHC	0.0050	U
309-00-2	Aldrin	0.0050	U
1024-57-3	Heptachlor Epoxide	0.0050	U
5103-74-2	gamma-Chlordane	0.0050	U
5103-71-9	alpha-Chlordane	0.0050	U
39765-80-5	trans-Nonachlor	0.0050	J
72-55-9	4,4'-DDE	0.010	U
60-57-1	Dieldrin	0.010	U
72-54-8	4,4'-DDD	0.010	U
5103-73-1	cis-Nonachlor	0.0050	U
50-29-3	4,4'-DDT	0.010	U
36355-01-8	Hexabromobiphenyl	0.020	U
8001-35-2	Toxaphene	0.20	U

 Lab Name:
 Aquatec, Inc.
 K40427R

 Lab Code:
 AQUAI
 Contract:
 91082

 Case:
 BIO
 SDG:
 42799

Phase Type: Biota

Phase Weight: 10.0 g

Extraction: Soxhlet

Dilution Factor: 1.0

 Lab Sample ID:
 213490

 Date Received:
 03/09/94

 Date Extracted:
 03/23/94

 Date Analyzed:
 04/28/94

 Sulfur Clean-up:
 N

Client ID No.

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	a
2052-07-5	2-Bromobiphenyl	0.010	U
2113-57-7	3-Bromobiphenyl	0.010	U
92-66-0	4-Bromobiphenyl	0.010	U
118-74-1	Hexachlorobenzene	0.0050	Ū
58-89-9	gamma-BHC	0.0050	U
309-00-2	Aldrin	0.0050	U
1024-57-3	Heptachlor Epoxide	0.0050	U
5103-74-2	gamma-Chlordane	0.0050	U
5103-71-9	alpha-Chiordane	0.0050	U
39765-80-5	trans-Nonachior	0.0050	U
72-55-9	4,4'-DDE	0.013	
60-57-1	Dieldrin	0.010	U
72-54-8	4,4'-DDD	0.010	U
5103-73-1	cis-Nonachlor	0.0050	U
50-29-3	4,4'-DDT	0.010	Ü
36355-01-8	Hexabromobiphenyl	0.020	U
8001-35-2	Toxaphene	0.20	U

Lab Name: Aquatec, Inc.

Lab Code: AQUAI

Contract: 91082

Case: BIO

K40428F

Client ID No.

SDG: 42799

Phase Type: Biota
Phase Weight: 10.0 g
Extraction: Soxhlet
Dilution Factor: 1.0

Lab Sample ID: 213492
Date Received: 03/09/94
Date Extracted: 03/23/94
Date Analyzed: 04/28/94
Sulfur Clean-up: N

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	Q
2052-07-5	2-Bromobiphenyl	0.010	U
2113-57-7	3-Bromobiphenyl	0.010	U
92-66-0	4-Bromobiphenyl	0.010	U
118-74-1	Hexachlorobenzene	0.0050	U
58-89-9	gamma-BHC	0.0050	U
309-00-2	Aldrin	0.0050	U
1024-57-3	Heptachlor Epoxide	0.0050	U
5103-74-2	gamma-Chlordane	0.0050	U
5103-71-9	alpha-Chlordane	0.0050	Ū
39765-80-5	trans-Nonachior	0.0050	U
72-55-9	4,4'-DDE	0.010	U
60-57-1	Dieldrin	0.010	U
72-54-8	4,4'-DDD	0.010	U
5103-73-1	cis-Nonachlor	0.0050	Ú
50-29-3	4,4'-DDT	0.010	U
36355-01-8	Hexabromobiphenyi	0.020	U
8001-35-2	Toxaphene	0.20	U

Lab Name: Aquatec, Inc.
Lab Code: AQUAI
Contract: 91082
Case: BIO

Client ID No. K40428R

SDG: 42799

Phase Type: Biota
Phase Weight: 10.0 g
Extraction: Soxhlet
Dilution Factor: 1.0

Lab Sample ID: 213493
Date Received: 03/09/94
Date Extracted: 03/23/94
Date Analyzed: 04/28/94
Sulfur Clean-up: N

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	Q
2052-07-5	2-Bromobiphenyl	0.010	U
2113-57-7	3-Bromobiphenyl	0.010	U
92-66-0	4-Bromobiphenyl	0.010	U
118-74-1	Hexachlorobenzene	0.0050	U
58-89-9	gamma-BHC	0.0050	U
309-00-2	Aldrin	0.0050	U
1024-57-3	Heptachlor Epoxide	0.0050	U
5103-74-2	gamma-Chlordane	0.0050	U
5103-71-9	alpha-Chlordane	0.0050	U
39765-80-5	trans-Nonachior	0.0050	U
72-55-9	4,4'-DDE	0.012	
60-57-1	Dieldrin	0.010	U
72-54-8	4,4'-DDD	0.010	U
5103-73-1	cis-Nonachlor	0.0050	U
50-29-3	4,4'-DDT	0.010	U
36355-01-8	Hexabromobiphenyl	0.020	U
8001-35-2	Toxaphene	0.20	U

Lab Name: Aquatec, Inc.

Lab Code: AQUAI

Contract: 91082

Case: BIO

K40430F

Client ID No.

SDG: 42799

Phase Type: Biota

Phase Weight: 10.0 g

Extraction: Soxhlet

Dilution Factor: 1.0

Lab Sample ID: 214487
Date Received: 03/20/94
Date Extracted: 03/25/94
Date Analyzed: 05/03/94
Sulfur Clean-up: N

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	a
2052-07-5	2-Bromobiphenyl	0.010	U
2113-57-7	3-Bromobiphenyl	0.010	Ü
92-66-0	4-Bromobiphenyl	0.010	U
118-74-1	Hexachlorobenzene	0.0050	U
58-89-9	gamma-BHC	0.0050	U
309-00-2	Aldrin	0.0050	U
1024-57-3	Heptachlor Epoxide	0.0050	U
5103-74-2	gamma-Chlordane	0.0050	U
5103-71-9	alpha-Chlordane	0.0050	U
39765-80-5	trans-Nonachlor	0.0050	U
72-55-9	4,4'-DDE	0.011	
60-57-1	Dieldrin	0.010	U
72-54-8	4,4'-DDD	0.010	U
5103-73-1	cis-Nonachlor	0.0050	U
50-29-3	4,4'-DDT	0.010	U
36355-01-8	Hexabromobiphenyl	0.020	U
8001-35-2	Toxaphene	0.20	U

Soxhlet

1.0

Extraction:

Dilution Factor:

Lab Name: K40430R Aquatec, Inc. Lab Code: AQUAI 91082 Contract: 42799 Case: BIO SDG: Lab Sample ID: 214488 Phase Type: Biota 03/20/94 Date Received: Phase Weight: 10.0 Date Extracted: 03/25/94

Date Analyzed:

Sulfur Clean-up:

Client ID No.

05/03/94

N

CAS NO.	COMPOUND	CONCENTRATION (mg/Kg)	a
2052-07-5	2-Bromobiphenyl	0.010	υ
2113-57-7	3-Bromobiphenyl	0.010	U
92-66-0	4-Bromobiphenyl	0.010	U
118-74-1	Hexachlorobenzene	. 0.0050	U
58-89-9	gamma-BHC	0.0050	U
309-00-2	Aldrin	0.0050	U
1024-57-3	Heptachlor Epoxide	0.0050	U
5103-74-2	gamma-Chlordane	0.0050	U
5103-71-9	alpha-Chlordane	0.0050	υ
39765-80-5	trans-Nonachlor	0.0050	U
72-55-9	4,4'-DDE	0.031	
60-57-1	Dieldrin	0.010	U
72-54-8	4,4'-DDD	0.010	U
5103-73-1	cis-Nonachlor	0.0050	U
50-29-3	4,4'-DDT	0.010	Ū
36355-01-8	Hexabromobiphenyl	0.020	U
8001-35-2	Toxaphene	0.20	U

MERCURY ANALYSES

Introduction

Analyses were performed according to USEPA CLP SOW ILM03.0.

The data validation process is intended to evaluate the data on a technical basis rather than a contract compliance basis. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission for validation. During the validation process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this valuation, qualifier codes may be added, deleted, or modified by the data validator. Validator qualified results are annotated with the following codes in accordance with National Functional Guidelines:

Concentration (C) qualifiers:

- U The analyte was analyzed for but not detected. The associated value is the instrument detection limit.
- B The reported value was obtained from a reading less than the contract required detection limit (CRDL) but greater than or equal to the instrument detection limit (IDL).

Quantitation (Q) qualifiers:

- E The reported value is estimated due to the presence of interference.
- M Duplicate injection precision not met.
- N Spiked sample recovery not within control limits.
- S Reported value was determined by the method of standard additions (MSA).
- W Post-digestion spike for Furnace-AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
- * Duplicate analysis not within control limits.
- + Correlation coefficient for MSA is less than 0.995.

Validation qualifiers:

- J The analyte was positively identified; however, the associated numerical value is an estimated concentration only.
- UJ The analyte was not detected above the reported sample detection limit. However, the reported limit is approximate and may or may not represent the actual limit of detection.
- R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant QC problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC test, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

Data Assessment

1. Ho g Time

The commended holding times for mercury analyses is 28 days from tissue hom, jenization. All samples were analyzed within this holding time.

2. Blank Contamination

Quality assurance blanks, i.e., preparation and calibration blanks, are prepared to identify any contamination which may have been introduced in to the samples during sample preparation or analysis. Preparation blanks measure laboratory contamination during preparation. Calibration blanks measure instrument contamination and sample cross-contamination.

All calibration and preparation blanks were found to be acceptable, with no analytes detected above the CRQL.

3. fibration

isfactory instrument calibration is established to insure that the instrument is pable of producing acceptable quantitative data. An initial calibration emonstrates that the instrument is capable of giving acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies at the instrument is giving satisfactory daily performance.

1 Initial Calibration

The correlation coefficient of the initial calibration was greater than the minimum required 0.995.

2 Continuing Calibration

All continuing calibration verification standards were acceptable.

.3 CRDL Standard

All CRDL standard recoveries were within acceptable limits.

4. Matrix Spike/Laboratory Duplicate

Matrix spike and laboratory duplicate data are used to assess the precision and accuracy of the analytical method.

4.1 Matrix spike

Recovery for the bass matrix spike was below acceptable limits. Recovery for the carp matrix spikes were above acceptable limits. All data have been qualified as estimated based on the deviations. Based on the recoveries it is possible that the bass data may be biased low and the carp data biased high.

4.2 Laboratory Duplicate

The bass laboratory duplicate relative percent difference (RPD) was within acceptable limits. The carp RPD were outside specified limits. No qualifiers have been added to the samples based on the RPDs.

5. Laboratory Control Sample (LCS)

All recoveries were within the acceptable recovery limits.

6. Serial Dilution

No ICP analyses were performed, therefore no serial dilution was necessary.

7. Furnace QC

No furnace analyses were performed.

8. Method of Standard Additions (MSA)

N SA were performed.

9. System Performance and Overall Assessment

Or rall system performance was acceptable. Other than those deviation specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

Data Validation Checksheets

	YES	NO	NA
Data Completeness and Deliverables			
Is there a narrative or cover letter present?	X		
Are the sample numbers included in the narrative?	X		
Are the sample chain-of-custodies present?	X		
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?		X	
Form I to IX			
Are all the Form I through Form IX labeled with:			
Laboratory name?	<u> </u>		
Sample No.?	X		
SDG No.?	X		
Correct units?	X		
Matrix?	X		
Raw Data			
Is the digestion log for flame AA/ICP present?			X
is the digestion log for furnace AA present?			X
Is the distillation log for mercury present?	X		
Is the distillation log for cyanides present?			X
Are preparation dates present on sample preparation logs/bench sheets?	X		
Are the measurement read out records present for:			
ICP			X
Flame AA			X
Furnace AA			X
Mercury	X		
Cyanides			X
Is the data legible?	X		
Is the data properly labeled?	X		
Holding Times			
Were mercury analyses performed within 28 days?	<u> </u>		

	YES	NO	NA_
Were cyanide distillations performed within 14 days?			<u>X</u>
Were other metal analysis performed within 6 months?			X
Form I (Final Data)			
Are all forms complete?	X		
Are correct units indicated on Form I's?	X		
Are all "less than IDL" values properly coded with "U"?	X		
Are the correct concentration qualifiers used with final data?	X		
Was a brief physical description of samples given on Form I's?		X	
Calibration			
Is a record of at least 2 point calibration present for ICP analysis?			X
Is a record of 5 point calibration present for Hg analysis?	X		
Is a record of 4 point calibration present for:			
Flame AA?			X
Furnace AA?			X
Cyanides?			X
Is one calibration standard at the CRDL level for all AA (except Hg) and cyanides analyses?			X
Is correlation coefficient less than .995 for:			
Mercury Analysis?	X		
Cyanide Analysis?			X
Atomic Absorption Analysis?			X
Form II A (Initial and Continuing Calibration Verification	tion)		
Present and complete for every metal and cyanide?	X		
Are all calibration standards (initial and continuing) within control limits for:			
Metals (90-110 %R)?			X
Hg (80-120 %R)?	X		
Cyanides (85-115 %R)?			X

	YES	NO	NΑ
Was continuing calibration performed every 10 samples or every 2 hours?	X		
Was the ICV for cyanides distilled?			X
Form II B (CRDL Standards for AA and ICP)			<u></u>
Was a CRDL standard (CRA) analyzed after initial calibration for all AA metals (except Hg)?			×
Was a mid-range calibration verification standard distilled and analyzed for cyanide analysis?			×
Was a 2xCRDL (or 2xIDL when IDL>CRDL) analyzed (CRI) for each ICP run?			X
Was CRI analyzed after ICV/ICB and before the final CCV/CCB, and twice every eight hours of ICP run?			×
Are CRA and CRI standards within control limits for metals (60-120 %R)?	X		
Is mid-range standard within control limits for cyanide (80-120 %R)			X
Form III (Initial and Continuing Calibration Blanks)			
Present and complete?	X		
Was an initial calibration blank analyzed?	X		
Was a continuing calibration blank analyzed after every 10 samples or every 2 hours (which ever is more frequent)?	X		
Are all calibration blanks (when IDL <crdl) (crdls)?<="" contract="" detection="" equal="" less="" limits="" or="" required="" td="" than="" the="" to=""><td>X</td><td></td><td></td></crdl)>	X		
Are all calibration blanks less than two times Instrument Detection Limit (when IDL>CRDL)?			×
Form III (Preparation Blank)			
Was one prep. blank analyzed for:			
each Sample Delivery Group SDG)?	X		
each batch of digested samples?	X		
each matrix type?	X		
Is concentration of prep. blank value greater than the CRDL when IDL is less than or equal to CRDL?		×	

	YES	NO	NA
If yes, is the concentration of the sample with the least concentrated analyte less than 10 times the prep. blank?			X
Is concentration of prep. blank value less than two times IDL, when IDL is greater than CRDL?			X
Is concentration of prep. blank below the negative CRDL?		X	
Form IV (ICP Interference Check Sample)			
Present and complete?			X
Was ICS analyzed at beginning and end of run (or at least twice every 8 hours)?			Х
Are all Interference Check Sample results inside the control limits (±20%)?			X
If no, is concentration of AI, Ca, Fe, or Mg lower than the respective concentration in ICS?			X
Form V A (Spiked Sample Recovery - Pre-Digestion/F	re-Distil	lation)	
Present and complete for:			
each SDG?	<u> </u>		
each matrix type?	X		
Was field blank used for spiked sample?		X	
Are all recoveries within control limits (75-125)?		X	
If no, is sample concentration greater than or equal to four times spike concentration?		X	
Are results outside the control limits (75-125%) flagged with "N" on Form I's and Form VA?	X		
Are any spike recoveries:			
less than 10%?		X	
between 10-74%?	X		
between 126-200%?	X		
greater than 200%?		X	
Form VI (Lab Duplicates)			
Present and complete for:			
each SDG?	X		

	YES	NO	NA
each matrix type?	X		
Was field blank used for duplicate analysis?		X	
Are all values within control limits (RPD 20% or difference ≤ ±CRDL)?		×	
If no, are all results outside the control limits flagged with an * on Form I's and VI?	×		
Is any RPD (where sample and duplicate are both greater than or equal to 5 times CRDL) > 100%?		X .	
Is any difference between sample and duplicate (where sample and/or duplicate is less than 5xCRDL) > 2xCRDL?		X	
Form VII (Laboratory Control Sample)			
Was one LCS prepared and analyzed for:			
each SDG?	X		
each batch samples digested/distilled?	×		
Is LLCS "Found" value higher than the control limits on Form VII?		×	
Is LCS "Found" lower than the control limits on Form VII?		×	
Form IX (ICP Serial Dilution)		 -	
Was Serial Dilution analysis performed for:			
each SDG?			X
each matrix type?			x
Was field blank(s) used for Serial Dilution Analysis?			X
Are results outside control limit flagged with an "E"" on Form I's and Form IX when initial concentration on Form IX is equal to 50 times IDL or greater.			×
Are any % difference values:			
> 10%?			X
≥100%?			×
Furnace Atomic Absorption (AA) QC Analysis			
Are duplicate injections present in furnace raw data (except during full Method of Standard Addition) for each sample analyzed be GFAA?			×

	YES	NO	NA
Do the duplicate injection readings agree within 20% Relative Standard Deviation (RSD) or coefficient of Variation (CV) for concentration greater than CRDL?			×
Was a dilution analyzed for sample with analytical spike recovery less than 40%?			X
is analytical spike recovery outside the control limits (85-115%) for any sample?			×
Form VIII (Method of Standard Addition Results)			
Present?		X	
If no, is any Form I result coded with "S" or a "+"?		X	
Is coefficient of correlation for MSA less than 0.990 for any sample?			×
Was MSA required for any sample but not performed?		X	
Is coefficient of correlation for MSA less than 0.995?			X
Are MSA calculations outside the linear range of the calibration curve generated at the beginning of the analytical run?			×
Was proper quantitation procedure followed as outlined in the SOW on page E-23?			×
Field Blank			
Is field blank concentration less than CRDL (or 2 x IDL when IDL > CRDL) for all parameters of associated aqueous and soil samples?			x
If no, was field blank value already rejected due to other QC criteria?			X
Form X, XI, XII (Verification of Instrumental Parameter	ers)		
is verification report present for :			
Instrument Detection Limits (quarterly)?	X		
ICP Interelement Correlation Factors (annually)?			X
ICP Linear Ranges (quarterly)?			X
Form X (Instrument Detection Limits)			
Are IDLs present for:			
all the analytes?	X		
all the instruments used?	X		

YES	NO	NA
	x	
		×
		X
	X	
		X
	YES	

Corrected Sample Analysis Data Sheets

1 EPA SAMPLE NO.

TEC					K40239F
		Contract: 9	1082	<u> </u>	.
I_ C:	ase No.: BI	O SAS No.	:		SDG No.: 427
ater): FIS	H_		Lab	Samp	le ID: 214493
): LOW_			Date	e Rec	eived: 03/20/9
100.	. 0				
ncentration	Units (ug	/L or mg/kg dry	y we:	ight)	: MG/KG
CAS No.	Analyte	Concentration	С	Q	M
7430-00-6	X1		_ _		NR
			- -		NR NR
			-1-		NR
			- -		NR
			-1-		NR
			- -		NR
		***	- -		NR
			- -		NR
7440-48-4	Cobalt		- -		NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
					NR
					NR
			_		NR
	Mercury_	0.11	- 1	N*	CV
			_ _		NR
				 /	NR NR
			-		NR NR
· - ·			-		NR
			-	 -	NR NR
			-	l	NR
			-		NR
,440 00 0			-		NR
	Clarit	y Before:			Texture:
	Clarit	y After:			Artifacts:
					-
	100. 100.	CAS No. 7429-90-5 7440-36-0 7440-38-2 7440-39-3 7440-41-7 7440-43-9 7440-43-9 7440-47-3 7440-47-3 7440-48-4 7440-50-8 7439-92-1 7439-95-4 7439-95-4 7439-97-6 7440-02-0 7440-02-0 7440-09-7 7782-49-2 7440-23-5 7440-23-5 7440-28-0 7440-66-6 Clarity Clarity	100.0 CAS No. Analyte Concentration Aluminum Antimony Arsenic Barium Cadmium 100.0 100.	LOW	

FORM I - IN

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

Name: AQ	UATEC		Contract: 9	K40239R		
ab Code: AQ	UAI_ C	ase No.: BI	O SAS No.	: .		SDG No.: 42799_
latrix (soil	/water): FIS	H_		L	ab Samp	le ID: 214494
evel (low/m	ed): LOW_	<u>—</u>		Da	ate Rec	eived: 03/20/94
Solids:	100.	, 0				
(Concentration	units (ug	/L or mg/kg dry	y ī	weight)	: MG/KG
	CAS No.	Analyte	Concentration	С	Q	м
	7429-90-5	Aluminum		-	 	NR
	7440-36-0	Antimony	[-		NR .
*	7440-38-2	Arsenic_		-		NR
	7440-39-3	Barium -				NR
	7440-41-7	Beryllium				NR
	7440-43-9	Cadmium_		_1]	NR
		Calcium		-1		NR NR
	7440-47-3 7440-48-4	Chromium Cobalt		-1		NR NR
	7440-48-4	Copper		-1		NR NR
	7439-89-6	Iron		-1		NR
	7439-92-1	Lead		-		NR
	7439-95-4	Magnesium		-1		NR
		Manganese				NR
	7439-97-6	Mercury	0.09	二	7 N*	CV
	7440-02-0	Nickel				NR
		Potassium		_[.		NR
	7782-49-2	Selenium_		_[.		NR
		Silver		_[.		NR
	7440-23-5 7440-28-0	Sodium Thallium		- -		NR NR
	7440-28-0	Vanadium .		- -		NR NR
	7440-62-2	Zinc		- -		NR NR
	000	Cyanide		- -		NR
				_ .		
lor Before:	1	Clarity	y Before:	• •	· • • •	' Texture:
			y After:			Artifacts:
TOT WIFEL:		Clarit	A WICEL!		•	m. tilatto:
mme nts:						
						

FORM I - IN

INORGANIC ANALYSES DATA SHEET EPA SAMPLE NO.

To Name: AQUA	ATEC		Contract: 9	1082	K40240F
					SDG No.: 42799
Matrix (soil/w	water): FIS	H_		Lab Samp	ole ID: 213435
Level (low/med	i): LOW_	_		Date Rec	ceived: 03/09/94
Solids:	100.	.0			
Co	oncentration	n Units (ug	/L or mg/kg dry	y weight)	: MG/KG
	CAS No.	Analyte	Concentration	c Q	м
	7429-90-5 7440-36-0				NR NR
	7440-36-0		[—————————————————————————————————————	1-1	NR NR
	7440-39-3	Barium -		·	NR NR
	7440-41-7	Beryllium			NR
	7440-43-9	Cadmium			NR
				-	NR
•	7440-47-3			-1	NR ND
•	7440-48-4 7440-50-8			-	NR NR
i	7440-50-8 7439-89-6	Copper	`	-1	NR NR
<u> i</u>		Lead]	-1	NR NR
		Magnesium		-1	NR NR
	7439-96-5	Manganese		_	NR
_	7439-97-6	Mercury	0.08	_\ <u>\\\</u>	CV
	7440-02-0	Nickel			NR
	7440-09-7	Potassium			NR
		Selenium_		-1	NR
		Silver		-1	NR ND
		Sodium Thallium		-	NR NR
		Thallium_ Vanadium		-	NR NR
		Zinc -	 :	-	NR NR
i		Cyanide		-11	NR
		- January			
olor Before:			y Before:		Texture:
olor After:			y After:		Artifacts:
omments:					
					
					

FORM I - IN

1 EPA SAMPLE NO. INORGANIC ANALYSES DATA SHEET

		INURGANIC	ANALYSES DATA	SUFFI	ı
Name: AQ	UATEC		Contract: 9	1082	K40240R
					SDG No.: 42799
					
Matrix (soil	/water): FIS	H		Lab San	ple ID: 213436
Level (low/m	ed): LOW_			Date Re	eceived: 03/09/94
% Solids:	100	. 0			
(Concentration	Units (ug	/L or mg/kg dry	y weight	:): MG/KG
	CAS No.	Analyte	Concentration	C Q	М
	7429-90-5	Aluminum		-	- NR
	7440-36-0			-	- NR
	7440-38-2	Arsenic			NR
	7440-39-3	Barium			NR
	7440-41-7	Beryllium			NR
	7440-43-9				NR
	7440-70-2				NR NR
	7440-47-3	Chromium_			NR NR
	7440-48-4	Cobalt		_]	- NR
	7439-89-6	Copper			- NR
	7439-92-1	Lead			- NR
		Magnesium		-	- NR
		Manganese		-	NR
		Mercury	0.04	_ ZN*_	- CV
		Nickel -		-	NR
		Potassium		-	NR
		Selenium			NR
		Silver -		_	- NR
		Sodium		_	NR NR
	7440-28-0	Thallium			NR
	7440-62-2	Vanadium		_	NR
	7440-66-6	Zinc			NR
		Cyanide		_	NR
Color Before:		Clarit	y Before:	_	Texture:
Color After:		Clarit	y After:		Artifacts:
Comments:					
					

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1 INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

and Name: AQUATE	c		Contract: 9	1082	K40241F
Lab Code: AQUAI_	Ca	se No.: BI	O SAS No.	:	SDG No.: 42799_
fatri x (soil/wat	er): FISH	<u>_</u>		Lab Samp	ole ID: 213438
evel (low/med):	LOW_	_		Date Rec	eived: 03/09/94
: Solids:	100.	0			
Conce	entration	Units (ug	/L or mg/kg dry	y weight)	: MG/KG
CA	s No.	Analyte	Concentration	C Q	м
74	29-90-5	Aluminum		-	NR
	40-36-0	Antimony		-	NR
74	40-38-2	Arsenic			NR
		Barium			NR
		Beryllium		_	NR
		CadmiumCalcium		_	NR NR
		Chromium		-	NR NR
		Cobalt		-	NR
		Copper		-	NR
		Iron		-	NR
74:	39-92-1	Lead			NR
	39-95-4	Magnesium			NR
74:		Manganese			NR
		Mercury_	0.12		CV
		Nickel		_	NR
		Potassium Selenium		_	NR NR
		Silver].	_[NR NR
		Sodium		-	NR
1 .		Thallium	·	-	NR
		Vanadium		-	NR
		Zinc -		_	NR
	(Cyanide			NR
				_	
olor Before:		Clarity	y Before:		Texture:
olor After:		Clarity	y After:		Artifacts:
mments:					

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

ab Name: A	QUATEC		Contract: 9	108	32	K40241R
ab Code: A	QUAI_ C	ase No.: BI	O SAS No.	: _		SDG No.: 42799
atrix (soi	1/water): FIS	H_		La	ab Sampl	le ID: 213439
evel (low/	med): LOW_			Da	ate Rece	eived: 03/09/94
Solids:	100	.0				
	Concentration	n Units (ug	/L or mg/kg dry	y w	veight):	MG/KG
	CAS No.	Analyte	Concentration	С	Q	M
	7429-90-5	Aluminum		-		NR
	7440-36-0	Antimony				NR
	7440-38-2	Arsenic				NR
	7440-39-3	Barium		_		NR
	7440-41-7	Beryllium		_		NR NR
		Cadmium_				NR NR
	7440-70-2	Calcium		-		NR
	7440-47-3 7440-48-4	Chromium_ Cobalt		-		NR NR
	7440-50-8	Copper		-		NR
	7439-89-6	Iron		-		NR
	7439-92-1	Lead		-1		NR
. .	7439-95-4	Magnesium		-1		NR
	7439-96-5	Manganese		-1		NR
	7439-97-6	Mercury	0.10			CV
		Nickel -				NR
	7440-09-7	Potassium				NR
		Selenium_				NR
	1 ·	Silver		_1		NR
	1	Sodium		_[.		NR
	7440-28-0	Thallium_		_ .		NR
		Vanadium_		_1.		NR
	7440-66-6	Zinc		-1.		NR
		Cyanide				NR
lor Before	:	Clarit	y Before:			Texture:
lor After:		Clarit	y After:			Artifacts:
ments:						
						
		·				

INORGANIC ANALYSES DATA SHEET

גסע	SAMPLE	MA
LFA	SAMPLE	NU.

		_			
) IQA :ema az	JATEC		Contract: 9	1082	K40242F
b Code: AQU	JAI C	ase No.: BI	O SAS No.	:	SDG No.: 42799
	- 'water): FIS				ole ID: 213441
CIIX (SCII)	W4402/			242 244	20 201 020112
vel (low/me	d): LOW			Date Rec	ceived: 03/09/94
Solids:	100	.0			
C	concentration	n Units (ug	/L or mg/kg dry	y weight)	: MG/KG
	CAS No.	Analyte	Concentration	C Q	м
	2400 00 E	- - - - - - - - - - 			. Viet
	7429-90-5	Aluminum_ Antimony		-	NR NR
	7440-38-2				NR NR
	7440-38-2				NR
	7440-39-3	Beryllium		-	NR
	7440-43-9			-	NR
	7440-70-2	Calcium		-	NR
	7440-47-3	Chromium			NR
		Cobalt		~	NR
	7440-50-8	Copper		-	NR
	7439-89-6	Iron		-	NR
	7439-92-1	Lead		-	NR
		Magnesium			NR
-	7439-96-5	Manganese		_	NR
		Mercury	0.12	- JN*	CV
	7440-02-0	Nickel -			NR
	7440-09-7	Potassium			NR
	7782-49-2	Selenium		-	NR
	7440-22-4	Silver			NR
	7440-23-5	Sodium			NR
	7440-28-0	Thallium_			NR
		Vanadium_	1		NR
	7440-66-6	Zinc			NR
		Cyanide			NR
		·		_	l l
or Before:		Clarit	y Before:		Texture:
or After:		Clarit	y After:		Artifacts:
ments:	•				
₩ £11C9 •					
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		· · · · · · · · · · · · · · · · · · ·			

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

			WINTING DAIN			
name: AOU	ATEC		Contract: 9	108	2	K40242R
						SDG No.: 4279
	_					le ID: 213442
atrix (soii/	water): FISH	1_		La	n samb	16 ID: 513445
evel (low/me	d): row_			Da	te Rec	eived: 03/09/94
Solids:	100.	0				
С	oncentration	Units (ug	/L or mg/kg dr	y w	eight)	: MG/KG
	1		[П		- 1
	CAS No.	Analyte	Concentration	C	Q	M
		Aluminum		- -		NR
	7440-36-0	Antimony_				NR
	7440-38-2	Arsenic				NR
	7440-39-3	Barium		_ -		NR
	7440-41-7	Beryllium		_ -		NR
	7440-43-9	Cadmium_		_ -		NR
	7440-70-2	Calcium		_]_		NR
	7440-47-3	Chromium_		_]_		NR
	7440-48-4	Cobalt				NR
	7440-50-8	Copper		_ _		NR
	7439-89-6	Iron		-1-		NR
		Lead		-1-		NR NR
_		Magnesium		- -		NR NR
		Manganese Mercury	0.11	- =		CV
		Nickel Nickel		- -	~,,_—	NR
		Potassium		- -		NR
		Selenium		- -		NR
		Silver		- -		NR
		Sodium		- -		NR
		Thallium		- -		NR
•		Vanadium		- -		NR
		Zinc]:	- -		NR
		Cyanide		- -		NR
lor Before:		Clarity	y Before:			Texture:
or After:		Clarity	After:			Artifacts:
ments:						

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1 INORGANIC ANALYSES DATA SHEET

EPA	SAMPLE	NO.
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Name: AQU	ATEC		Contract: 9	1082	K40244F	
Lab Code: AQU	AI_ C	ase No.: BI	O SAS No.	:	SDG No.: 427	- <u></u>
Matrix (soil/	water): FIS	H		Lab Sar	mple ID: 214496	~
Level (low/med	d): LOW_			Date Re	eceived: 03/20/9	34
Solids:	100.	. 0				
Co	oncentration	n Units (ug	/L or mg/kg dry	y weight	t): MG/KG	
	CAS No.	Analyte	Concentration	C Q	M	
	7450 00 -	_ [_	- 1775	
		Aluminum		-	NR NR	
	7440-36-0 7440-38-2			-	- NR NR	
·	7440-38-2			-	$-\frac{NR}{NR}$	
					$- \mathbf{NR} $	
	7440-43-9			-	- NR	
	7440-70-2				- NR	
	7440-47-3	Chromium			NR NR	
	7440-48-4	Cobalt			NR	
	7440-50-8	Copper			NR NR	
		Iron			NR NR	
		Lead			NR	
		Magnesium		_	NR NR	
	7439-96-5	Manganese		_	NR	
•		Mercury	0.08	_ <u></u> *	CA	
		Nickel		_[NR NR	
	7440-09-7	Potassium		_	NR NR	
	7782-49-2	Selenium_ Silver		_	NR ND	
	7440-22-4	Silver		_	NR NR	
	7440-23-5 7440-28-0			-	NR NR	
j		Vanadium .		-	$-\left \frac{NR}{NR} \right $	
j	7440-62-2	Zinc		-	- NR NR	
	,0-00-0	Cyanide		-	- NR	
				-	-	
ł	· ·	·	I,	!	<u> </u>	
olor Before:		Clarit	y Before:		Texture:	
olor After:		Clarity	y After:		Artifacts:	
mments:						
						_
						-
						_

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

		THOUGHNIC	WINTING DAIN	SHEET	
Lab Name: AQU	ATEC		Contract: 9	1082	K40244R
Lab Code: AQU	AI_ Ca	ase No.: BI	O SAS No.	:	SDG No.: 42799_
Matrix (soil/	water): FISE	1 _		Lab Samp	ole ID: 214497
Level (low/med				Date Rec	eived: 03/20/94
<pre>\$ Solids:</pre>	100.	. 0			
Co	1		/L or mg/kg dry		
	CAS No.	Analyte	Concentration	C Q	M
	7429-90-5	Aliminim			NR NR
		Antimony		-	NR
	7440-38-2	Arsenic			NR
	7440-39-3	Barium			NR
	7440-41-7	Beryllium			NR
	,	Cadmium_		_	NR
		Calcium_		_	NR
		Chromium_			NR
	7440-48-4			_	NR
	7440-50-8	Copper		_	NR
		Iron			NR
		Lead		_	NR NR
*	7439-95-4			_	NR NR
	7439-96-5	Manganese	0.05	- IN*	CV
	7439-97-6 7440-02-0	Mercury	0.05	- - 	NR
	7440-02-0			-	NR
		Selenium		-	NR
		Silver		-	NR
		Sodium		-	NR
		Thallium		_	NR
		Vanadium		_	NR
	7440-66-6	Zinc		-	NR NR
	,	Cyanide		_	NR
					<u> </u>
olor Before:		Clarit	y Before:		Texture:
olor After:		Clarit	y After:		Artifacts:
omments:					
		· · · · · · · · · · · · · · · · · · ·			

1 INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

Name: AQ	UATEC	_	Contract: 9	10	82	K40245F
Lab Code: AQ	UAI_ C	ase No.: BI	O SAS NO.	:		SDG No.: 42799_
Matrix (soil,	/water): FIS	H_		L	ab Sampl	e ID: 213444
Level (low/me	ed): LOW_		·	D	ate Rece	eived: 03/09/94
Solids:	100.	. 0				
C	Concentration	Units (ug	/L or mg/kg dry	Y	weight):	MG/KG
	CAS No.	Analyte	Concentration	c	Q	M
	7429-90-5	Aluminum		-		NR
	7440-36-0	Antimony_		_		NR
	7440-38-2	Arsenic		_		NR
	7440-39-3					NR
	7440-41-7	Beryllium		_		NR
	7440-43-9			_		NR
	7440-70-2	Calcium		-		NR
	7440-47-3 7440-48-4			_		NR NR
	7440-50-8	Copper		-		NR NR
	7439-89-6	Iron		-		NR NR
		Lead		-		NR
	_	Magnesium		-		NR
		Manganese		-		NR
_		Mercury	0.10	-1		cv
		Nickel -		-	<u> </u>	NR
	7440-09-7	Potassium				NR
		Selenium		_		NR.
		Silver -		_		NR
		Sodium		_		NR .
	7440-28-0	Thallium_		<u> </u>		NR
		Vanadium_		_		NR
	7440-66-6	Zinc		_		NR
		Cyanide		_		NR
	I	1.		_1		1
olor Before:		Clarit	y Before:			Texture:
olor After:		Clarity	y After:		. 1	Artifacts:
omments:						
						
		· · · · · · · · · · · · · · · · · · ·			 	

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

./ame: AQ	UATEC		Contract: 9	108	32	K40245R
-						SDG No.: 42799
trix (soil	/water): FIS	H_		La	ab Samp	le ID: 213445
vel (low/m	ed): LOW			Da	te Rec	eived: 03/09/94
Solids:	100	.0				
•	Concentratio	n Units (ug	/L or mg/kg dry	y w	eight)	: MG/KG
	CAS No.	Analyte	Concentration	С	Q	м
	7429-90-5	Aluminum		-		NR
	7440-36-0			-		NR
	7440-38-2	Arsenic		-1		NR
	7440-39-3					NR
		Beryllium				NR
	7440-43-9					NR
	7440-70-2					NR
	7440-47-3	Chromium_		_1.		NR
	7440-48-4	Cobalt		-1	[NR
	7440-50-8	Copper		_ .		NR
	7439-89-6	Iron		-		NR
	7439-92-1 7439-95-4	Lead		-1-		NR NR
	7439-96-5	Magnesium Manganese		-		NR
~	7439-97-6	Mercury	0.08	-1-	*N	CV
	7440-02-0	Nickel -		-1-	77.4	NR
	7440-09-7	Potassium		-1-		NR
	7782-49-2	Selenium]:	- -		NR
		Silver		- -		NR
		Sodium		- -		NR
		Thallium		- -		NR
	7440-62-2	Vanadium		- -		NR
	7440-66-6	Zinc -		- -		NR
		Cyanide		- -		NR
r Before:		Clarit	y Before:	' -	1	' Texture:
or After:			y After:			Artifacts:
		 ,				

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

La Name: AQU	ATEC		Contract: 9	1082	K40304F
Lab Code: AQU	AI_ C	ase No.: BI	O SAS No.	:	SDG No.: 42799_
Matrix (soil/	water): FISI	I _		Lab Samp	le ID: 213447
Level (low/me	d): LOW_			Date Rec	eived: 03/09/94
t Solids:	100.	0			
C	oncentration	Units (ug	/L or mg/kg dr	y weight)	: MG/KG
	CAS No.	Analyte	Concentration	C Q	м
	7440-43-9 7440-70-2 7440-47-3 7440-48-4 7440-50-8 7439-89-6 7439-95-4 7439-96-5 7439-97-6 7440-02-0 7440-09-7 7782-49-2 7440-23-5 7440-28-0 7440-66-6	Antimony Arsenic Barium Beryllium Cadmium Calcium Chromium Cobalt Copper Iron Lead Magnesium Manganese Mercury Nickel	0.24	J.N*	NR NR NR NR NR NR NR NR NR NR NR NR NR N
olor Before:		Clarity	y Before:		Texture:
olor After:		Clarity	After:		Artifacts:
omments:					

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1 INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

Carlon Co.	I_ _ 0	O SAS No.	: D	ab Samp	ple ID: 213448 Ceived: 03/09/	2799 8
LOW_ 100. ration	I_ 0 Units (ug	/L or mg/kg dr	D	ab Samp	ple ID: 213448 Ceived: 03/09/	8
LOW_ 100. ration	I_ 0 Units (ug	/L or mg/kg dr	D	ab Samp	ple ID: 213448 Ceived: 03/09/	8
LOW_ 100. ration	O Units (ug	/L or mg/kg dr	D	ate Rec	ceived: 03/09/	
100.	O Units (ug					/94
ation	Units (ug		Υ '	weight)	: MG/KG	
ation	Units (ug		Υ,	weight)	: MG/KG	
····			Y '	weight)	: MG/KG	
····			<i>-</i>			
	Analyte		_			
	Analyte		_			
		Concentration	C	Q	M	
90-5	Aluminum		_		NR NR	
	Antimony		-		NR	
	Arsenic		-			
			-			
			-			
			-			
		[[-			
			-			
			-			
			-			
		·	-			
			_			
			-			
			-		NR	
7-6	Mercury	0.16	-	TN*	CV	•
2-0			-		NR	
	Potassium		_		NR	
					NR	
			Ξ1			
			\equiv I			
			_			
['	Cyanide		_		NR	
	I.		_		11	
	Clarit	y Before:			Texture: _	
	Clarit	y After:			Artifacts: _	
	38-2 39-3 41-7 43-9 70-2 47-3 48-4 59-6 95-4 96-5 97-6 99-2 12-4 13-5 18-0 18-6 18-6	38-2 39-3 41-7 Barium Beryllium Cadmium Calcium Chromium Chromium Cobalt Copper Iron Beryllium Calcium Chromium	38-2 Arsenic 39-3 Barium 41-7 Beryllium 43-9 Cadmium 70-2 Calcium 47-3 Chromium 48-4 Cobalt 50-8 Copper 39-6 Iron 92-1 Lead 95-4 Magnesium Manganese 97-6 Mercury 92-0 Nickel 99-7 Potassium 99-2 Selenium 99-2 Selenium 99-2 Sodium 18-0 Thallium 18-0 Thallium 18-0 Zinc 18-0 Cyanide Clarity Before:	Arsenic 39-3 Barium 41-7 Beryllium 43-9 Cadmium 70-2 Calcium 47-3 Chromium 48-4 Cobalt 50-8 Copper 39-6 Iron 92-1 Lead 95-4 Magnesium Manganese 97-6 Mercury 92-0 Nickel 99-7 Potassium 99-2 Selenium 99-2 Selenium 89-2 Sodium 88-0 Thallium 82-2 Vanadium 86-6 Zinc Cyanide Clarity Before:	Arsenic 39-3 Barium 41-7 Beryllium 43-9 Cadmium 70-2 Calcium 47-3 Chromium 48-4 Cobalt 50-8 Copper 39-6 Iron 92-1 Lead 95-4 Magnesium Manganese 97-6 Mercury 92-0 Nickel 99-7 Potassium 99-2 Selenium 99-2 Selenium 19-2 Sodium 19-2 Vanadium 21-6-6 Cyanide Clarity Before:	Arsenic Barium NR NR NR NR NR NR NR N

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1 EPA SAMPLE NO. INORGANIC ANALYSES DATA SHEET

de Name: A	QUATEC		Contract: 9	10	82	K40305F
Lab Code: A	QUAI_ C	ase No.: BI	O SAS No.	: .		SDG No.: 42799
Matrix (soi	l/water): FIS	H_		L	ab Samp	le ID: 213450
Level (low/	med): LOW			Da	ate Rec	eived: 03/09/94
Solids:	100	.0				
	Concentration	n Units (ug	/L or mg/kg dry	y v	weight)	: MG/KG
	CAS No.	Analyte	Concentration	С	Q	м
	7429-90-5	Aluminum		-		NR
	7440-36-0	Antimony_		-		NR
	7440-38-2	Arsenic		_		NR
	7440-39-3	Barium				NR
				_		NR
	7440-43-9	Cadmium_ Calcium		_		NR NR
	7440-70-2 7440-47-3	Chromium		-1		NR NR
	7440-47-3	Cobalt		-	·	NR NR
	7440-50-8	Copper		-1	 	NR
	7439-89-6	Iron	[-1		NR
		Lead		-1		NR
	7439-95-4	Magnesium		-1		NR
	7439-96-5	Manganese				NR
	7439-97-6	Mercury	0.23		*NT	CV
	7440-02-0	Nickel				NR
	7440-09-7	Potassium				NR
		Selenium_		_[NR
		Silver		_]		NR
	7440-23-5	Sodium		_1		NR
	7440-28-0	Thallium_		_[.		NR
	7440-62-2	Vanadium_		_[.		NR
	7440-66-6	Zinc		_[.		NR
		Cyanide		-1-		NR
		·	l.	_1.	I	
lor Before:		Clarity	y Before:	_		Texture:
lor After:		Clarity	After:			Artifacts:
mments:						
						
		· · · · · · · · · · · · · · · · · · ·				
						

FORM I - IN

1 EPA SAMPLE NO. INORGANIC ANALYSES DATA SHEET

Lab Name: AQU	JATEC		_ Contract: 9	1082	K40305R
Lab Code: AQU	JAI_ C	ase No.: BI	O SAS No.	:	SDG No.: 42799_
Matrix (soil,	/water): FIS	H		Lab Samp	ole ID: 213451
Level (low/me	ed): LOW	-		Date Rec	eived: 03/09/94
Solids:	100	.0			
c	concentration	n Units (ug	/L or mg/kg dr	y weight)	: MG/KG
	CAS No.	Analyte	Concentration	C Q	м
		-			1
	7429-90-5 7440-36-0	Aluminum		_	NR NR
	7440-38-2				NR NR
	7440-38-2	Barium		- 	NR NR
	7440-41-7				NR
	7440-43-9				NR
	7440-70-2			-	NR
	7440-47-3	1		-	NR
	7440-48-4	Cobalt			NR
	7440-50-8	Copper		_	NR
	7439-89-6	Iron —			NR
	•	Lead			NR
		Magnesium			NR
	7439-96-5	Manganese			NR
		Mercury_	0.23		CV
		Nickel		_	NR
	7440-09-7	Potassium		_	NR
	7782-49-2	Selenium_		_]	NR
	7440-22-4	Silver	····	-	NR
	7440-23-5	Sodium Thallium		-	NR
	7440-28-0 7440-62-2	Vanadium_		-	NR
	7440-62-2	Zinc		-	NR NR
	/440-00-0	Cyanide		-[]	NR
		cyanitue .		-	MR.
	l	!	i.	_!!	!
olor Before:		Clarit	y Before:		Texture:
olor After:		Clarit	y After:	_	Artifacts:
omments:					
					

FORM I - IN

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

I_ Cater): FISH 100. 1	Analyte Aluminum_Antimony_		L D	weight)	SDG No.: 42799 ple ID: 213453 ceived: 03/09/94): MG/KG
100. 100. 100. 100. 100. 100. 100. 100.	Analyte Aluminum Antimony Arsenic	/L or mg/kg dr	р У 1	weight)	ceived: 03/09/94): MG/KG
100. ncentration CAS No. 7429-90-5 7440-36-0 7440-38-2 7440-39-3 7440-41-7 7440-43-9	Analyte Aluminum Antimony Arsenic	/L or mg/kg dr	у ¹	weight)	: MG/KG
CAS No. 7429-90-5 7440-36-0 7440-39-3 7440-41-7 7440-43-9	Analyte Aluminum Antimony Arsenic	T	1	T	M
7429-90-5 7440-36-0 7440-38-2 7440-39-3 7440-41-7 7440-43-9	Analyte Aluminum Antimony Arsenic	T	1	T	M
7429-90-5 7440-36-0 7440-38-2 7440-39-3 7440-41-7 7440-43-9	Aluminum_ Antimony_ Arsenic	Concentration	c -	Q	
7440-36-0 7440-38-2 7440-39-3 7440-41-7 7440-43-9	Antimony_ Arsenic		1=		-
7440-36-0 7440-38-2 7440-39-3 7440-41-7 7440-43-9	Antimony_ Arsenic		ı — '		INPI
7440-38-2 7440-39-3 7440-41-7 7440-43-9	Arsenic		1	<u> </u>	NR NR
7440-39-3 7440-41-7 7440-43-9		1	-	I	- NR
7440-41-7 7440-43-9			-		- NR
7440-43-9			-		NR
	Cadmium				NR
7440-70-2	Calcium_				NR
7440-47-3	Chromium		1_1		NR
	Cobalt		_		NR
7440-50-8	Copper				NR
7439-89-6	Iron			I	NR
			_		NR
			_		NR
		<u></u>	-1	₹₩ ∓	NR
	Nickel		-1	7Tu	NR NR
	Potageiim		-1		NR NR
		 [-		NR
			-1		NR
		·	-1		NR
			-		NR
7440-62-2			-		NR
	Zinc	[_[NR
	Cyanide		=		NR
1	Clarity	y Before:	_! 		Texture:
					Artifacts:
777777777	7439-92-1 7439-95-4 7439-96-5 7439-97-6 7440-02-0 782-49-2 782-4 7	1439-92-1 Lead Magnesium Manganese 439-97-6 Mercury Mickel Magnesium Manganese Mercury Mickel Mercury Mickel Mercury Mickel Mercury Mercury Mercury Mickel Potassium Selenium Silver Sodium Thallium Vanadium Zinc Cyanide Clarity Mercury Manganese Mercury			

FORM I - IN

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

א מו	ane:	AQUATI	3C		Contract: 9	108	32	K40306R
						: _		SDG No.: 42799
tri	x (sc	oil/wat	er): FIS	H_		Lá	ib Samp	ole ID: 213454
vel	(low	//med) :	LOW			Da	ate Rec	eived: 03/09/94
Soli	ids:		100	. 0				
		Conc	entration	Units (ug	/L or mg/kg dry	y w	eight)	: MG/KG
		c	AS No.	Analyte	Concentration	С	Q	м
		7	429-90-5	Aluminum		-		NR
			440-36-0	Antimony		-		NR
		7	440-38-2	Arsenic				NR
			440-39-3	Barium				NR
			440-41-7	Beryllium				NR
			440-43-9	Cadmium		-1		NR
			440-70-2 440-47-3	Chromium		-1		NR NR
				Cobalt		-1		NR NR
			440-50-8	Copper		-1		NR
			139-89-6	Iron —		-1		NR
			39-92-1	Lead		-1		NR
_				Magnesium		-1		NR
.			139-96-5	Manganese				NR
			139-97-6	Mercury	0.33	\equiv 1.	IN*	[CV]
			40-02-0	Nickel		_ .		NR
			40-09-7	Potassium		_ .		NR
				Selenium_		_].		NR
				Silver Sodium		- -		NR NR
		1/4	40-23-5 40-28-0	Thallium		-1-		NR NR
			40-62-2	Vanadium		- -		NR
			40-66-6	Zinc		- -		NR
				Cyanide		_ -		NR
_		۱				_1-		
or I	Befor	re:			y Before:			Texture:
or ?	After	·· _		Clarit	y After:			Artifacts:
ment	ts:							

FORM I - IN

1 INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

Name: 1	AQUATEC		Contract: 9	1082	.
Code: A	AQUAI_	Case No.: BI	O SAS No.	:	SDG No.: 4279
rix (soi	ll/water): Fl	SH_		Lab Samp	le ID: 213456
vel (low/	med): LO	W		Date Rec	eived: 03/09/94
olids:	10	0.0			
	Concentrati	on Units (ug	/L or mg/kg dry	y weight)	: MG/KG
	1				
	CAS No.	Analyte	Concentration	C Q	M
	7429-90-	Aluminum		[-	NR
=		Antimony		-	NR
	7440-38-			-	NR
	7440-39-			-	NR
	7440-41-			-	NR
		Cadmium			NR
	7440-70-2			-	NR
	7440-47-3			-	NR
	7440-48-4			-	NR
	7440-50-8				NR
	7439-89-6			-	NR
	7439-92-1			-	NR
	7439-95-4			-	NR
	7439-96-5			-	NR
	7439-97-6		0.15	- - N*	CV
	7440-02-0			-	NR
	7440-09-7			-	NR
	7782-49-2			-	NR
	7440-22-4			-	NR
	7440-23-5			-	NR
	7440-28-0			-	NR
	7440-62-2		 .	-	NR
	7440-66-6		 [·	-[NR
	, 330 00 0	Cyanide		-	NR
r Before	:	Clarit	y Before:		Texture:
r After:		Clarit	y After:		Artifacts:
ents:					
			 	<u>, =</u>	
					
					

FORM I - IN

1 INORGANIC ANALYSES DATA SHEET

א רוים	SAMPLE	NTA
LPA	SAMPLE	NU.

K40308R
No.: 42799
: 213457
: 03/09/94
KG
re:
acts:

FORM I - IN

INORGANIC ANALYSES DATA SHEET EPA SAMPLE NO.

Mame: AQI	JATEC		Contract: 9	1082_		K40309F
ab Code: AQI	JAI_ C	ase No.: BI	O SAS No.			SDG No.: 42799
atrix (soil,	/water): FIS	н_		Lab Sa	mple	ID: 213459
evel (low/me	ed): LOW			Date R	lecei	ved: 03/09/94
Solids:	100	. 0				
· c	oncentration	n Units (ug	/L or mg/kg dr	y weigh	t): 1	MG/KG
	CAS No.	Analyte	Concentration	c Q	M	_
	7429-90-5	Aluminum		-	$- _{\overline{\mathbf{N}}}$	5
	7440-36-0			-	$- _{\mathbf{M}}$	
	7440-38-2	Arsenic			- NI	
	7440-39-3	Barium -			NI	R
		Beryllium				
		Cadmium_		_	_ NI	
	7440-70-2 7440-47-3	Calcium Chromium		_	NI NI	
		Cobalt		-1		
		Copper		-		
	7439-89-6	Iron		-	- NE	
		Lead		-	- NE	
	7439-95-4	Magnesium		-	NE	
	7439-96-5	Manganese	[NF	र
	7439-97-6	Mercury	0.24		_ cv	
	7440-02-0	Nickel		_	NE	
		Potassium		_	_ NR	
		Selenium_		_	_ NR	
		Silver		_	NR	
		Thallium	}	_	- NR	
	7440-62-2	Vanadium .]·	-	$- _{NR}^{NR}$	
	7440-66-6	Zinc		-	$- _{NR}$	
		Cyanide	 -	-	- NR	
				_	_ _	
or Before:		Clarity	y Before:		Te	xture:
or After:		Clarity	After:		Ar	tifacts:
ments:						
	<u> </u>			<u> </u>		

FORM I - IN

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

Name: AQU	IATEC		Contract: 9	10	82	K4	0309R
	<u></u>		O SAS No.			SDG N	o.: 42799_
atrix (soil/	water): FISE	H_		L	ab Samp	le ID:	213460
evel (low/me	ed): LOW_	_		D	ate Rec	eived:	03/09/94
Solids:	100.	. 0					
С	oncentration	Units (ug	/L or mg/kg dr	Y ¹	weight)	: MG/KG	
	CAS No.	Analyte	Concentration	c	Q	м	
	7429-90-5	Aluminum		-	<u></u>	NR	
	7440-36-0	Antimony_		-		NR	
	7440-38-2	Arsenic		_		NR	
		Barium		_		NR	
	7440-41-7	Beryllium		-		NR	
		Cadmium		-		NR	
	7440-70-2	Calcium		-		NR	
	7440-47-3	Chromium				NR	
	7440-48-4	Cobalt		-		NR	
	7440-50-8 7439-89-6	Copper		-		NR NR	
		Lead		-		NR	
	7439-95-4	Magnesium		-		NR	
Name .	7439-96-5	Manganese		-		NR	
		Mercury	0.19	-1	2N*	CV	
•	7440-02-0	Nickel		-	<u> </u>	NR	
		Potassium		-		NR	
	7782-49-2	Selenium		-1		NR	
	7440-22-4	Silver [_		NR	
		Sodium		_		NR	
		Thallium				NR	
		Vanadium]				NR	
		Zinc		\equiv l		NR	
	l	Cyanide		_		NR	
				_			
or Before:		Clarit	y Before:			Texture	:
lor After:		Clarity	y After:			Artifac	ts:
ments:							
		···					
		····					

FORM I - IN

INORGANIC ANALYSES DATA SHEET EPA SAMPLE NO.

Deno 1	Name:	AQUATEC		Contract: 9	1082	2	K40310F
				_			SDG No.: 42799_
Matr:	ix (so	il/water): FI	SH_		Lal	b Sampl	le ID: 213462
Leve:	l (low	/med): LO	w		Dat	te Rece	eived: 03/09/94
so:	lids:	100	0.0				
		Concentration	on Units (ug	/L or mg/kg dr	y we	≥ight):	MG/KG
		CAS No.	Analyte	Concentration	c	Q	M
		7429-90-5	Aluminum		- -		NR
		7440-36-0	Antimony		- -		NR
	٠	7440-38-2	Arsenic				NR
		7440-39-3			_ _		NR
			Beryllium		1-1-		NR
			Cadmium_		_ _		NR
			Calcium		<u> - -</u>		NR MB
		7440-47-3	Chromium_ Cobalt		- -		NR NR
		7440-50-8			- -		NR NR
		7439-89-6			-1-		NR
		7439-92-1	Lead		_1_	1	NR
·		7439-95-4	Magnesium				NR
		7439-96-5					NR
		7439-97-6		0.12	_ =		CV
		7440-02-0 7440-09-7			-1-		NR NR
		7782-49-2	1 1		- -		NR NR
		7440-22-4			-1-		NR NR
		7440-23-5			- -		NR
		7440-28-0	Thallium		_ -	1	NR
		7440-62-2				1	NR
		7440-66-6					NR
			Cyanide		_ _		NR
lor	Before	e:	Clarit	y Before:]	Texture:
			Clarit	y After:		P	Artifacts:
mmen		· <u></u>					

FORM I - IN

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

RADIANTEC Contract: 91082 R4031	.OR
Lab Sample ID: 213	
Lab Sample ID: 213	4279!
Cas No.	
Cas No.	09/94
CAS No.	•
CAS No.	
7429-90-5 7440-36-0 7440-38-2 7440-39-3 8arium 7440-41-7 Beryllium 7440-47-3 Cadmium 7440-47-3 Chromium 7440-48-4 Cobalt 7439-89-6 7439-92-1 Formal Manganese 7439-97-6 Mercury NR NR NR NR NR NR NR NR NR NR NR NR NR	
7440-36-0 7440-38-2 7440-39-3 7440-41-7 7440-43-9 7440-70-2 7440-47-3 7440-48-4 7440-50-8 7439-89-6 7439-92-1 7439-95-4 7439-95-4 7439-97-6 7440-02-0 7440-09-7 Potassium RR RR RR RR RR RR RR RR RR RR RR RR R	
7440-36-0 7440-38-2 7440-39-3 7440-41-7 8eryllium 7440-47-3 Cadmium Calcium Chromium Cobalt Copper T439-89-6 T439-92-1 T439-95-4 Magnesium MR MR MR MR MR MR MR MR MR MR MR MR MR	
7440-38-2	
7440-41-7 7440-43-9 7440-70-2 7440-70-2 7440-47-3 7440-48-4 Cobalt 7440-50-8 7439-89-6 7439-92-1 1 Lead 7439-95-4 7439-95-4 7439-96-5 7439-97-6 7440-02-0 7440-09-7 Potassium NR NR NR NR NR NR NR NR NR NR NR NR NR	
7440-43-9 7440-70-2 7440-47-3 Calcium Calcium NR NR 7440-48-4 Cobalt Copper T439-89-6 T439-92-1 Lead T439-95-4 Magnesium T439-96-5 Manganese T440-02-0 NR NR NR NR NR NR NR NR NR NR NR NR NR	
7440-70-2 Calcium 7440-47-3 Chromium 7440-48-4 Cobalt 7440-50-8 Copper 7439-89-6 Iron 7439-92-1 Lead 7439-95-4 Magnesium 7439-96-5 Manganese 7440-02-0 Nickel 7440-09-7 Potassium NR	
7440-47-3 7440-48-4 7440-50-8 7439-89-6 7439-92-1 7439-95-4 7439-96-5 7439-97-6 7440-02-0 7440-09-7 Potassium Table Copping	
7440-48-4 Cobalt	
7440-50-8 Copper	
7439-89-6 Iron	
7439-92-1 Lead NR 7439-95-4 Magnesium 7439-96-5 Manganese 7439-97-6 Mercury 0.05 7440-02-0 Nickel NR 7440-09-7 Potassium	
7439-95-4 Magnesium 7439-96-5 Manganese 7439-97-6 Mercury 7440-02-0 Nickel 7440-09-7 Potassium	
7439-97-6 Mercury 0.05 TN* CV NR NR NR NR	
7439-97-6 Mercury 0.05 TN* CV NR NR NR NR	
7440-02-0 Nickel NR NR NR	
7440-09-7 Potassium NR	
7440-22-4 Silver NR	
7440-23-5 Sodium NR	
7440-28-0 Thallium NR	
7440-62-2 Vanadium	
7440-66-6 Zinc NR	
Cyanide NR	
or Before: Clarity Before: Texture:	
or After: Clarity After: Artifacts:	
ments:	

FORM I - IN

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

and Name: AQ	UATEC		Contract: 9	10	82	K40318F
ab Code: AQ	UAI_ C	ase No.: BI	O SAS No.	:		SDG No.: 42799
trix (soil	/water): FIS	н_		L	ab Sampl	le ID: 213465
vel (low/m	ed): LOW	_		D	ate Rece	eived: 03/09/94
Solids:	100	. 0				
(Concentration	n Units (ug	/L or mg/kg dry	y v	weight):	MG/KG
	CAS No.	Analyte	Concentration	С	Q	м
	7429-90-5	Aliminim		-		NR
	7440-36-0			-		NR
	7440-38-2	Arsenic		-		NR
	7440-39-3	Barium -		-		NR
	7440-41-7					NR
	7440-43-9					NR
	7440-70-2					NR
	7440-47-3					NR
		Cobalt		_		NR
	7440-50-8	Copper		_		NR
	7439-89-6	Iron		_		MR
	7439-92-1	Lead		_		MR
	7439-95-4 7439-96-5	Magnesium		-		NR NR
		Manganese Mercury	0.15	-1		CV
	7440-02-0	Nickel -		-		NR
		Potassium		-		NR I
	7782-49-2	Selenium		-[NR
	7440-22-4	Silver		-1		NR
	7440-23-5	Sodium		-1		NR
	7440-28-0	Thallium		-		NR .
	7440-62-2	Vanadium		-1		VR.
	7440-66-6	Zinc	·	-		VR
		Cyanide				VR.
		·		_1		
or Before:		Clarit	y Before:			Cexture:
or After:		Clarit	y After:		. 1	Artifacts:

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

an Name	: AQUATEC		Contract: 9)10	82	K40318R
	 .				***************************************	SDG No.: 42799_
Matrix (soil/water): FI	SH_		I	ab Samp	ole ID: 213466
Level (le	ow/med): LO	w		D	ate Rec	eived: 03/09/94
Solids	: 10	0.0				
	Concentration	on Units (ug	/L or mg/kg dr	Y	weight)	: MG/KG
	CAS No.	Analyte	Concentration	c	Q	м
	7429-90-	5 Aluminum		-		NR
	7440-36-0			1-	∤	NR
	7440-38-2			-		NR
	7440-39-3			-		NR
	7440-41-7			-	l	NR
	7440-43-9			-		NR
	7440-70-2			<u> </u>		NR
	7440-47-3					NR
	7440-48-4					NR
	7440-50-8			_	l	NR
	7439-89-6			 _		NR
1	7439-92-1			_		NR
·—	7439-95-4			_		NR
	7439-96-5		0.10	_		NR
	7439-97-6 7440-02-0		0.10	1	<u>*N</u>	CV NR
	7440-02-0			_		NR
	7782-49-2			-		NR
	7440-22-4			-		NR
	7440-23-5			-		NR
	7440-28-0			-		NR
	7440-62-2			-		NR
	7440-66-6			-		NR
		Cyanide				NR
	l			_		
olor Befo	ore:	Clarit	y Before:		-	Texture:
lor Afte	er:	Clarit	y After:		-	Artifacts:
mments:						
		····				

FORM I - IN

INORGANIC ANALYSES DATA SHEET EPA SAMPLE NO.

Name: AQ	UATEC		Contract: 9	1082	K40319F
ab Code: AQI	UAI_ Ca	se No.: BI	O SAS No.	:	SDG No.: 42799
Matrix (soil,	/water): FISH	I_	•	Lab Samp	ole ID: 213468
evel (low/me	ed): LOW_	_		Date Rec	eived: 03/09/94
Solids:	100.	0			
c	Concentration	Units (ug	/L or mg/kg dry	y weight)	: MG/KG
	CAS No.	Analyte	Concentration	C Q	м
	7429-90-5	Aluminum			NR
		Antimony			NR
	7440-38-2	Arsenic		-	NR
		Barium -			NR
	7440-41-7	Beryllium			NR
	7440-43-9	Cadmium			NR
	7440-70-2	Calcium			NR
	7440-47-3				NR
	7440-48-4				NR
	7440-50-8	Copper			NR
		Iron			NR
		Lead			NR
		Magnesium			NR
L		Manganese			NR
	7439-97-6	Mercury	0.30	*N_	cv
		Nickel			NR
	1	Potassium		_	MR
		Selenium_			NR
		Silver			NR
		Sodium			NR
		Thallium			NR
		Vanadium_		_	NR
		Zinc		_	NR
		Cyanide		_	NR
lor Before:	.	Clarit	y Before:	-	Texture:
202 202020					
lor After:		Clarity	y After:		Artifacts:
mments:					
					
					
		····			

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1 INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

Name: AQU	JATEC		Contract: 9	10	82	K40319R
Lab Code: AQU	JAI_ Ca	ase No.: BI	O SAS No.	:		SDG No.: 42799_
Matrix (soil/	water): FISH	<u>-</u>		L	ab Samp	ple ID: 213469
Level (low/me	ed): LOW_	-		D	ate Red	ceived: 03/09/94
% Solids:	100.	o .				
C	concentration	Units (ug	/L or mg/kg dry	Y 1	weight)	: MG/KG
	CAS No.	Analyte	Concentration	С	Q	м
	7429-90-5	Aluminum		-		NR
	7440-36-0	Antimony_		-		NR
	7440-38-2	Arsenic		_		NR
		Barium				NR
	7440-41-7	Beryllium				NR
		Cadmium_		_		NR
		Calcium_		-1		NR
		Chromium_ Cobalt		-		NR NR
		Copper_		-		NR NR
		Iron		-		NR
		Lead		-		NR
		Magnesium		-1		NR
	7439-96-5	Manganese		-		NR
_	7439-97-6	Mercury	0.20	-1	J_N*_	CV
	7440-02-0	Nickel		_	- -	NR
		Potassium				NR
		Selenium_		_		NR
		Silver		_		NR
		Sodium		_[NR
		Thallium		_		NR
		Vanadium]		_/		NR
		Zinc		_		NR
		Cyanide		-1		NR
	ll			_1		I <u></u> I
olor Before:		Clarit	y Before:			Texture:
olor After:		Clarit	y After:			Artifacts:
omments:						
Christics:						
		· - · · · · · · · · · · · · · · · · · ·				

FORM I - IN

INORGANIC ANALYSES DATA SHEET EPA SAMPLE NO.

Mame: AQU	ATEC		Contract: 9	108	2	K40320F
			_			SDG No.: 42799
trix (soil/	water): FIS	H		La	b Samp	le ID: 213471
vel (low/me	a): Low_			Da	te Rec	eived: 03/09/94
Solids:	100.	. 0				
C	oncentration	Units (ug	/L or mg/kg dry	y w	eight)	: MG/KG
	CAS No.	Analyte	Concentration	c	Q	м
	7429-90-5	X1::=:=:=		_ -		NR
	7440-36-0	Antimony		- -		NR NR
	7440-38-2	Arsenic		- -		NR
		Barium		- -		NR
	7440-41-7	Beryllium				NR
	7440-43-9	Cadmium		- -		NR
	7440-70-2	Calcium		- -		NR
	7440-47-3	Chromium				NR
	7440-48-4	Cobalt ~		-1-		NR
	7440-50-8	Copper		- -		NR
		Iron		_ -		NR
	7439-92-1	Lead				NR
	7439-95-4	Magnesium				NR
		Manganese				NR)
		Mercury_	0.12	_ _		CV
	7440-02-0	Nickel		_ _		NR
		Potassium		_ _		NR
		Selenium_		_ _		NR
		Silver		_ _		NR
		Sodium		_ _		NR
		Thallium		_ _		NR
		Vanadium		-1-		NR
		Zinc	<u></u> /.	-/-		NR
		Cyanide		_ _		NR
or Before:		Clarit	y Before:			Texture:
or After:		Clarity	Y After:			Artifacts:
ments:						
			 –			

FORM I - IN

INORGANIC ANALYSES DATA SHEET EPA SAMPLE NO.

Dab Name: A	QUATEC		Contract: 9	10	82		K40320R
						- ••	SDG No.: 42799
Matrix (soil	L/water): FISH	<u>-</u>		L	ab Samp	ple	ID: 213472
Level (low/m	ned): LOW_			D	ate Rec	ei [.]	ved: 03/09/94
Solids:	100.	0					
	Concentration	Units (ug	/L or mg/kg dry	у 1	weight)	: 1	MG/KG
	CAS No.	Analyte	Concentration	c	Q	M	
•	7429-90-5	A1:::::		 _		NI	5
	7440-36-0	Antimony		-		NE	
	7440-38-2	Arsenic		-		NE	
		Barium		-		NE	
	7440-41-7			-		NF	
		Cadmium		-		NF	
	7440-70-2			-		NF	
	7440-47-3			-		NE	t l
	7440-48-4	Cobalt -				NE	
		Copper				NR	
	7439-89-6	Iron				NR	
		Lead		_1		NR	
		Magnesium		_		NR	
		Manganese		_		NR	
		Mercury_	0.10	_	<u> </u>	CV	
		Nickel		_		NR	
		Potassium	<u></u>	_		NR	
		Selenium_		_		NR	
		Silver		_		NR	
		Sodium		_		NR	
		Thallium		_		NR	
		Vanadium		_]		NR NR	
				-1		NR NR	
		Cyanide				IAK	
olor Before:		Clarit	y Before:			Te	xture:
olor After:		Clarity	y After:			Ar	tifacts:
omments:							
		·					

FORM I - IN

1 EPA SAMPLE NO. INORGANIC ANALYSES DATA SUFFT

Lan Name:					1
	AQUATEC		Contract: 9	1082	K40321F
Lab Code:					SDG No.: 42799
Matrix (so	oil/water): FI	SH_		Lab Sam	ple ID: 213474
Level (lo	w/med): LO			Date Red	ceived: 03/09/94
Solids:	100	0.0			
	Concentration	on Units (ug	/L or mg/kg dry	y weight)	: MG/KG
	CAS No.	Analyte	Concentration	C Q	м
	2420-00-5	Aluminum		_	NR NR
	7440-36-0			-	- NR
	7440-38-2			-	NR
	7440-39-3	Barium		-	NR
	7440-41-7	Beryllium			NR
	7440-43-9	Cadmium_			NR
	7440-70-2			_	NR
		Chromium			NR
	7440-48-4			_	NR
	7440-50-8			_	NR
	7439-89-6 7439-92-1			_	NR NR
	7439-95-4				NR NR
	7439-96-5			-	NR NR
	7439-97-6		0.03	- 3 N*	CV
•	7440-02-0	Nickel		-12-4	NR
	7440-09-7	Potassium		-	NR
	7782-49-2				NR
	7440-22-4			-	NR
	7440-23-5			-	NR
	7440-28-0				NR
	7440-62-2				NR
	7440-66-6	Zinc			NR
		Cyanide_			NR
	l	- ll ,	I.	_	11
olor Befor	e:	Clarit	y Before:		Texture:
olor After		Clarit	y After:		Artifacts:
omments:					

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INORGANIC ANALYSES DATA SHEET EPA SAMPLE NO.

.ab Name: AQ	UATEC		Contract: 9	1082	K40321R
ab Code: AQ	UAI_ C	ase No.: BI	O SAS No.	:	SDG No.: 42799_
atrix (soil,	/water): FIS	H_		Lab Samp	ole ID: 213475
evel (low/me	ed): LOW_			Date Rec	eived: 03/09/94
Solids:	100	. 0			
c	Concentration	n Units (ug	/L or mg/kg dry	y weight)	: MG/KG
	CAS No.	Analyte	Concentration	C Q	м
	7429-90-5	Aluminum			NR
	7440-36-0	Antimony			NR
	7440-38-2	Arsenic			NR
	7440-39-3	Barium			NR
	7440-41-7 7440-43-9	Beryllium Cadmium			NR NR
		Calcium		'-	NR NR
	7440-47-3	Chromium			NR
	7440-48-4	Cobalt -			NR
	7440-50-8	Copper		_	NR
		Iron Lead		_]	NR NR
		Magnesium	[-	NR NR
		Manganese		-	NR NR
_		Mercury	0.25	*N±	cv
	7440-02-0	Nickel			NR
		Potassium		_	NR
		Selenium_		- i	NR NR
		Sodium .	 [·	-	NR NR
		Thallium		-	NR
	7440-62-2	Vanadium		_	NR
	7440-66-6	Zinc	1	_	NR
		Cyanide		-	NR
lor Before:		Clarity	y Before:	_	Texture:
lor After:			After:		Artifacts:
		_			
mments:					
					

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1 INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

CAS No.	?
Cas No.	2799
Cas No. Analyte Concentration C Q M 7429-90-5 Aluminum Antimony Arsenic NR 7440-39-3 Barium NR 7440-41-7 Cadmium NR 7440-47-3 Calcium NR 7440-47-3 Chromium NR 7440-48-4 Cobalt NR 7439-92-1 Lead NR 7439-95-4 Magnesium NR 7439-97-6 Manganese NR 7440-22-4 Silver 7440-23-5 7440-23-5 Sodium NR 7440-23-5 Sodium NR 7440-66-6 Cyanide NR Cyanide	7
CAS No.	/94
CAS No.	
T429-90-5	
7440-36-0 7440-38-2 7440-39-3 Barium 7440-41-7 Peryllium Privatorium Privatori	
7440-36-0 7440-38-2 7440-43-3 Barium 7440-41-7 Peryllium 7440-43-9 Cadmium 7440-47-3 Chromium 7440-48-4 Cobalt 7439-89-6 T439-92-1 T439-95-4 Magnesium Manganese Maryl-1 Manganese Mercury Mickel Mick	
7440-38-2 7440-39-3 Barium 7440-41-7 Beryllium 7440-70-2 Calcium 7440-47-3 Chromium 7440-50-8 7439-92-1 Cadmium 7439-95-4 Magnesium 7440-90-7 Mercury 7440-02-0 7440-02-0 7440-22-4 7440-23-5 Sodium 7440-28-0 7440-66-6 Cyanide NR NR NR NR NR NR NR NR NR NR NR NR NR	
T440-41-7	
7440-43-9 7440-70-2 7440-47-3 7440-48-4 Cobalt Copper 7439-89-6 7439-92-1 Lead 7439-95-4 Magnesium MR MR MR MR MR MR MR MR MR MR MR MR MR	
7440-70-2 Calcium NR NR 7440-47-3 Chromium NR NR NR 7440-50-8 Copper NR NR 7439-89-6 Iron NR NR 7439-95-4 Magnesium NR NR 7439-96-5 Manganese NR NR 7440-02-0 Nickel NR NR 7782-49-2 Selenium NR NR 7440-23-5 Sodium NR NR 7440-66-6 Thallium NR NR NR NR NR NR NR N	
7440-47-3 7440-48-4 7440-50-8 7439-89-6 7439-92-1 7439-95-4 7439-96-5 Manganese 7439-97-6 Mercury 7440-02-0 Nickel 7440-09-7 Potasslum 7782-49-2 Selenium 7440-23-5 Sodium 7440-62-2 7440-66-6 Zinc Cyanide NR NR NR NR NR NR NR NR NR NR NR NR NR	
7440-48-4 7440-50-8 7439-89-6 1ron 1439-92-1 1ead 7439-95-4 Magnesium 7439-96-5 Manganese 7440-02-0 Nickel 7440-09-7 Potassium 7782-49-2 Selenium 7440-22-4 Silver 7440-23-5 7440-66-6 Thallium 7440-66-6 Zinc Cyanide NR NR NR NR NR NR NR NR NR NR NR NR NR	
7440-50-8 7439-89-6 1ron 1439-95-4 7439-95-4 Magnesium 7439-96-5 Manganese 7440-02-0 Nickel 7440-09-7 Potassium 7782-49-2 Selenium 7440-22-4 Silver 7440-23-5 Thallium 7440-66-6 Cyanide NR NR NR NR NR NR NR NR NR NR NR NR NR	
7439-89-6 Iron NR 7439-92-1 Lead NR 7439-95-4 Magnesium NR 7439-96-5 Manganese NR 7440-02-0 Nickel NR 7440-09-7 Potassium NR 7782-49-2 Selenium NR 7440-22-4 Silver NR 7440-28-0 Thallium NR 7440-66-6 Zinc NR Cyanide NR	
7439-92-1 7439-95-4 Magnesium 7439-96-5 Manganese 7439-97-6 Mercury 7440-02-0 Nickel 748-49-2 Selenium 7440-22-4 Silver 7440-23-5 Sodium 7440-66-6 Zinc Cyanide NR NR NR NR NR NR NR NR NR NR NR NR NR	
7439-95-4 Magnesium Manganese 7439-97-6 Mercury 0.13 N* CV 7440-02-0 Nickel NR 7782-49-2 Selenium NR 7440-22-4 Silver 7440-23-5 Sodium 7440-66-6 Zinc Cyanide NR	
7439-97-6 7440-02-0 Nickel 7440-09-7 Potassium 7782-49-2 Selenium Selenium NR NR NR NR NR NR NR NR NR NR NR NR NR	
7440-02-0 7440-09-7 7782-49-2 7440-22-4 7440-23-5 7440-28-0 7440-66-6 Zinc Cyanide NR NR NR NR NR NR NR NR NR NR NR NR NR	
7440-09-7 7782-49-2 7440-22-4 7440-23-5 7440-28-0 7440-62-2 7440-66-6 Cyanide Potassium Selenium Selenium NR NR NR NR NR NR NR NR NR NR NR NR NR	
7782-49-2 7440-22-4 7440-23-5 7440-28-0 7440-62-2 7440-66-6 Cyanide NR NR NR NR NR NR NR N	
7440-22-4 7440-23-5 7440-28-0 7440-62-2 7440-66-6 Cyanide NR NR NR NR NR NR NR N	
7440-23-5 7440-28-0 7440-62-2 7440-66-6 Cyanide NR NR NR NR NR NR NR N	
7440-28-0 7440-62-2 7440-66-6 Zinc Cyanide NR	
7440-62-2 Vanadium	
7440-66-6 Zinc NR Cyanide NR	
lor Before: Clarity Before: Texture:	
lor Before: Clarity Before: Texture:	
lor After: Clarity After: Artifacts: _	
ments:	

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

Name: AQU	=						
ab Code: AQU	AI_ C	ase No.: BI	O SAS No.	: _		s	DG No.: 42799
atrix (soil/	water): FIS	H_		L	ab Samp	ple	ID: 213478
evel (low/me	d): LOW_	_		Da	ate Red	ceiv	ed: 03/09/94
Solids:	100	. 0					
C	oncentration	n Units (ug	/L or mg/kg dry	y v	weight)	: M	G/KG
	CAS No.	Analyte	Concentration	С	Q	M	
	7429-90-5	A lumi rum		-		NR	
	7440-36-0	Antimony		-		NR	
	7440-38-2	Arsenic		-		NR	
	7440-39-3	Barium -				NR	
	7440-41-7	Beryllium				NR	
	7440-43-9	Cadmium_				NR	
	7440-70-2	Calcium_		_		NR	
	7440-47-3	Chromium		_		NR	
	7440-48-4 7440-50-8	Cobalt Copper		-		NR NR	
	7439-89-6	Iron		-[NR	
		Lead		-1		NR	
		Magnesium		-1		NR	
_	7439-96-5	Manganese				NR	
	7439-97-6	Mercury_	0.07	_[*N	CV	
	7440-02-0	Nickel		_[.		NR	
	7440-09-7	Potassium		_[.		NR	
	7782-49-2	Selenium_ Silver		-1-		NR NR	
	7440-22-4 7440-23-5	Sodium Sodium		- -		NR NR	
	7440-28-0	Thallium	······	- -		NR	
	7440-62-2	Vanadium_		- -		NR	
	7440-66-6	Zinc		- -		NR	
		Cyanide		_ -		NR	
						1_1	
or Before:		Clarit	y Before:			Tex	ture:
or After:		Clarit	y After:			Art	ifacts:
ments:							

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INORGANIC ANALYSES DATA SHEET EPA SAMPLE NO.

	UATEC		Contract: 9	10	·	
in code: WA	UAI_ C	ase No.: BI	O SAS No.	:		SDG No.: 42799
trix (soil	/water): FIS	H_		L	ab Samp	le ID: 213480
evel (low/m	ed): LOW	<u> </u>		D	ate Rec	eived: 03/09/94
Solids:	100	.0				
(Concentration	n Units (ug	/L or mg/kg dry	У 1	weight)	: MG/KG
	CAS No.	Analyte	Concentration	С	Q	м
	7429-90-5	Aluminum		 –		NR
	7440-36-0			-		NR
	7440-38-2			_		NR
	7440-39-3					NR
		Beryllium		1		NR
	7440-43-9					NR
	7440-70-2			_		NR
		Chromium		_		NR NR
	7440-48-4			_		NR
	7440-50-8	Copper		_		NR
	7439-89-6 7439-92-1	Iron		-		NR
		Magnesium		-		NR
.		Manganese		-		NR
		Mercury	0.14	-	<u>*N*</u>	CV
		Nickel -		-		NR
		Potassium				NR
	7782-49-2	Selenium		_		NR
		Silver		\exists		NR
	7440-23-5	Sodium		_1		NR
	7440-28-0	Thallium_		_		NR
	7440-62-2	Vanadium_		_		NR
	7440-66-6	Zinc		_		NR
		Cyanide		-		NR
		,	l	<u>_</u>		1
or Before:		Clarit	y Before:		-	Texture:
or After:		Clarit	y After:			Artifacts:
ments:						
						
						

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

Lab Name: AQU	ATEC		Contract: 9	1082	K40327R
					SDG No.: 42799_
Matrix (soil/	water): FISH	-	•	Lab Samp	le ID: 213481
Level (low/me	d): LOW_			Date Rec	eived: 03/09/94
% Solids:	100.	. 0			
C	oncentration	Units (ug	/L or mg/kg dry	y weight)	: MG/KG
	CAS No.	Analyte	Concentration	C Q	м
	7429-90-5			-	NR
	7440-36-0	Antimony_			NR .
	7440-38-2	Arsenic			NR
	7440-39-3 7440-41-7	Barium Beryllium		-	NR NR
		Cadmium		-	NR
	7440-70-2	Calcium			NR
	7440-47-3				NR
	7440-48-4	Cobalt		_	NR
	7440-50-8 7439-89-6	Copper		-	NR NR
		Lead		-	NR
*	7439-95-4	Magnesium		_	NR
	7439-96-5	Manganese			NR
	7439-97-6	Mercury	0.07	_ <u></u> x	CV
		Nickel		_	NR
		Potassium Selenium			NR NR
		Silver		-	NR
	7440-23-5	Sodium		-	NR
	7440-28-0	Thallium			NR
		Vanadium]			NR
		Zinc			NR
		Cyanide			NR
olor Before:		Clarity	y Before:		Texture:
olor After:		Clarity	After:		Artifacts:
omments:					

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1 INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

L. Name: A	AQUATEC		Contract: 9	10	82	K40421F
	\		O SAS No.	:		SDG No.: 42799_
Matrix (soi	11/water): FIS	H_		L	ab Samp	le ID: 213483
Level (low/	med): LOW_	_		D	ate Rec	eived: 03/09/94
Solids:	100.	. 0				
	Concentration	Units (ug	/L or mg/kg dry	y t	weight)	: MG/KG
	CAS No.	Analyte	Concentration	С	Q	м
	7429-90-5	Aliminim		-		NR
	7440-36-0	Antimony_		-		NR
	7440-38-2	Arsenic		_		NR
ř	7440-39-3	Barium -		-		NR
	7440-41-7	Beryllium				NR
	7440-43-9	Cadmium				NR
	7440-70-2	Calcium _		_		NR
	7440-47-3	Chromium_		_		NR
	7440-48-4	Cobalt				NR
	7440-50-8 7439-89-6	Copper		-1		NR NR
	7439-89-8	Lead		-1	[NR NR
		Magnesium		-		NR
		Manganese		-1		NR
		Mercury	0.03	-	<u></u>	CV
		Nickel		-1		NR
		Potassium	 [-		NR
	7782-49-2	Selenium				NR
		Silver				NR
		Sodium				NR
		Thallium		_[]		NR
		Vanadium		_[.		NR
		Zinc		- -		NR
		Cyanide		- -		NR
olor Before	:	Clarit	y Before:			Texture:
olor After:		Clarity	y After:			Artifacts:
omments:						

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INORGANIC ANALYSES DATA SHEET EPA SAMPLE NO.

		Contract: 9	1087		
JAI_ C		_			SDG No.: 42799
/water): FIS	H_		Lab	Sample	ID: 213484
ed): LOW	_		Date	Recei	.ved: 03/09/94
100	. 0				
concentration	units (ug	/L or mg/kg dry	y wei	ght):	MG/KG
CAS No.	Analyte	Concentration	c	Q M	
			-	N	R
7440-36-0	Antimony			N.	R
7440-38-2	Arsenic_			N	R
			- -		
7440-41-7	Cadmina		-		
			-		
7440-47-3	Chromium		-1		
7440-48-4	Cobalt		_1_	NI	R
7440-50-8	Copper			N	R
7439-89-6	Iron			NI	R
			_		
			-1		
			- -		
1			-1- 7- 1		
			-		
			-		
7440-22-4			_		
7440-23-5	Sodium		_	NF.	ર
				NF.	ર
			_		
1			-1		
	-laurae -		_		
'	Clarity	Before:		Te	exture:
	Clarity	After:		Ar	tifacts:
	-				
	water): FISP Ed): LOW 100. Concentration CAS No. 7429-90-5 7440-36-0 7440-38-2 7440-39-3 7440-41-7 7440-43-9 7440-47-3 7440-47-3 7440-48-4 7440-50-8 7439-95-4 7439-95-4 7439-95-6 7439-97-6 7439-97-6 7440-02-0 7440-02-0 7440-23-5 7440-23-5 7440-28-0 7440-66-6	CAS No. Analyte T429-90-5 T440-36-0 T440-41-7 T440-43-9 T440-47-3 T440-50-8 T439-95-4 T439-95-4 T439-95-6 T439-97-6 T440-02-0 T440-02-0 T440-22-4 T440-23-5 T440-22-4 T440-23-5 T440-22-2 T440-66-6 T440-66-6 Clarity Clarit	CAS No.	Lab Low	Date Recein 100.0

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INORGANIC ANALYSES DATA SHEET

da Name: AQI	UATEC		Contract: 9	1082	K40422F
ab Code: AQI	UAI_ C	ase No.: BI	O SAS No.	:	SDG No.: 42799_
Matrix (soil,	/water): FIS	н_		Lab Samp	ole ID: 213486
evel (low/me	ed): LOW			Date Rec	eived: 03/09/94
Solids:	100	. 0			
c	Concentration	n Units (ug	/L or mg/kg dry	y weight)	: MG/KG
	CAS No.	Analyte	Concentration	C Q	м
	7429-90-5	X111111111			NR
	7440-36-0			-	NR NR
	7440-38-2	Arsenic		-	NR
	7440-39-3	Barium	·		NR
	7440-41-7	Beryllium			NR
	7440-43-9	Cadmium			NR
	7440-70-2	Calcium			NR
	7440-47-3	Chromium_		_	NR
	7440-48-4	Cobalt		_	NR
	7440-50-8 7439-89-6	Copper		_	NR NR
		Lead			NR
4		Magnesium		-	NR
		Manganese			NR
_	7439-97-6	Mercury	0.05		CV
	7440-02-0	Nickel			NR
		Potassium			NR
		Selenium_		_/	NR
		Silver		_	NR
	7440-23-5 7440-28-0	Sodium Thallium		_ 	NR NR
	7440-62-2	Vanadium		-	NR
	7440-66-6	Zinc		-	NR
		Cyanide		-	NR
				-	
•					•
lor Before:		Clarit	y Before:		Texture:
lor After:		Clarity	y After:		Artifacts:
mments:					
					
					

FORM I - IN

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

Name: AQ	UATEC		Contract: 9	1082	K40422R
					SDG No.: 42799
atrix (soil	/water): FISI	H_		Lab Sa	mple ID: 213487
evel (low/me	ed): LOW_			Date R	eceived: 03/09/94
Solids:	100.	. 0			
		. Traiba (na	/7 am/less dans		h). <i>Va (Va</i>
	concentration	Units (ug	/L or mg/kg dry	weigh	t): MG/KG
	CAS No.	Analyte	Concentration	C Q	м
	7429-90-5	Aluminum		-	NR NR
	7440-36-0	Antimony -			NR
	7440-38-2	Arsenic			NR
	7440-39-3	Barium			NR
	7440-41-7	Beryllium			NR
		Cadmium_			NR NR
		Calcium_			NR
		Chromium			<u> </u>
	7440-48-4				_ NR
	7440-50-8	Copper			NR
	7439-89-6	Iron			_ NR
		Lead			NR NR
	7439-95-4			_	NR
*	7439-96-5	Manganese		_	NR
	7439-97-6	Mercury_	0.16	_\ZN*_	_ cv
	7440-02-0	Nickel		_	NR
		Potassium		_	NR
		Selenium_			NR
		Silver		_	_ NR
		Sodium			NR
		Thallium_		_{	NR NR
		Vanadium_	.	_	NR
	7440-66-6	Zinc		_	NR
		Cyanide		-	NR
lor Before:	·	Clarit	y Before:		Texture:
lor After:		Clarit	y After:		Artifacts:
mments:					

FORM I - IN

1 INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

Name: AQ	UATEC		_ Contract: 9)10	82		K40423F
			SIO SAS No.:				SDG No.: 42799_
Matrix (soil	/water): FIS	н_		I	ab Samp	ple	ID: 214490
Level (low/m	ed): LOW			D	ate Rec	cei	ved: 03/20/94
% Solids:	100	. 0					
(Concentration	n Units (ug	/L or mg/kg dr	Y	weight)	: 1	MG/KG
	CAS No.	Analyte	Concentration	c	Q	м	_
	7429-90-5	Aluminum		-	I	NI	5
	7440-36-0			-		N	
	7440-38-2	Arsenic		-		NE	
	7440-39-3			_		NI	
	7440-41-7			<u> </u>		NI	
	7440-43-9			_		NF	
	7440-70-2			_		NF	
	7440-47-3	Chromium_ Cobalt		_		NF NF	
	7440-50-8	Copper		-		NE	
	7439-89-6	Iron —		-		NR	
	7439-92-1	Lead		-		NR	
	7439-95-4	Magnesium		-		NR	
	7439-96-5	Manganese		-		NR	
	7439-97-6	Mercury	0.08		<u>*N</u>	CV	
	7440-02-0	Nickel		$\exists I$		NR	
		Potassium		_		NR	
		Selenium_		-1		NR	
		Silver		-1		NR NR	
	7440-23-3	Thallium		-		NR	
		Vanadium_		-		NR	
	7440-66-6	Zinc		-		NR	
		Cyanide		-		NR	
olor Before:		Clarit	y Before:			Te	xture:
olor After:		Clarity	y After:			Ar	tifacts:
omments:							
· · · · · · · · · · · · · · · · · · ·					·		

FORM I - IN

1 EPA SAMPLE NO.

ر ا ده	Name: A	QUATEC		Contract: 9	1082	K40423R
						_ SDG No.: 42799
latr:	ix (soi	l/water): FIS	SH_		Lab Sar	mple ID: 214491
eve]	l (low/m	ned): LOW			Date Re	eceived: 03/20/94
So]	lids:	100	.0			
		Concentratio	n Units (ug	/L or mg/kg dr	y weight	:): MG/KG
		CAS No.	Analyte	Concentration	C Q	М
		7429-90-5	Aluminum		-	- NR
		7440-36-0			-	- NR
		7440-38-2	Arsenic		-	- NR
		7440-39-3				NR
			Beryllium			_ NR
		7440-43-9			_	NR
		7440-70-2			_	NR
			Chromium		_/	NR
		7440-48-4			-	NR NR
		7440-50-8 7439-89-6	Copper		_ [$-\left \frac{NR}{NR} \right $
		7439-92-1	Lead		-	- NR
		7439-95-4	Magnesium		-	- NR
		7439-96-5	Manganese		-[NR
		7439-97-6	Mercury	0.04	- 2N*	CV
		7440-02-0	Nickel'		_	NR
		7440-09-7	Potassium			NR
		7782-49-2	Selenium_			NR
		7440-22-4	Silver			NR
		7440-23-5	Sodium			NR
		7440-28-0	Thallium_		_	NR
		7440-62-2	Vanadium_		_	NR
		7440-66-6	Zinc		_	NR NR
			Cyanide			- NR
lor	Before:		Clarit	y Before:		Texture:
	After:			y After:		Artifacts:
mmen	nts:				- 	
					·	

FORM I - IN

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

Name: AQ	UATEC		Contract: 9	10	82	K40427F
Lab Code: AQ	UAI_ C	ase No.: BI	O SAS No.	:		SDG No.: 42799
Matrix (soil	/water): FIS	H_		L	ab Samp	ole ID: 213489
Level (low/mo	ed): LOW_	_		Da	ate Rec	eived: 03/09/94
& Solids:	100.	. 0				
C	Concentration	units (ug	/L or mg/kg dry	y v	weight)	: MG/KG
				_		1
	CAS No.	Analyte	Concentration	С	Q	M
	7429-90-5	Aluminum		-		NR
	7440-36-0			_		NR
	7440-38-2	Arsenic				NR
	7440-39-3	Barium				NR
	7440-41-7	Beryllium				NR
	7440-43-9	Cadmium_		_		NR
	7440-70-2	Calcium_		_		NR
		Chromium_		-		NR
	7440-48-4	1		-1		NR
	7440-50-8	Copper		-		NR NR
	7439-89-6 7439-92-1	Iron	 [-		NR NR
	f -	Magnesium		-1		NR
		Manganese		-1		NR
	7439-97-6	Mercury	0.05	-	<u></u> *N	CV
	7440-02-0	Nickel -		-1	7	NR
		Potassium		-1		NR
		Selenium		-1		NR
		Silver		-1		NR
		Sodium		-1		NR
		Thallium		-1		NR
	7440-62-2	Vanadium		-1		NR
	7440-66-6	Zinc		- :		NR
		Cyanide		~ `		NR
olor Before:		Clarit	y Before:			Texture:
olor After:		Clarit	y After:			Artifacts:
omments:						
						·
					 	

FORM I - IN

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

اب Name: AQI	JATEC		Contract: 9	1082	K40427R
b Code: AQ	JAI_ C	ase No.: BI	SAS No.	:	SDG No.: 42
trix (soil,	/water): FIS	н_		Lab Sa	ample ID: 213490
vel (low/me	ed): LOW			Date I	Received: 03/09/9
Solids:	100	.0			
c	concentration	n Units (ug	/L or mg/kg dry	y weigh	nt): MG/KG
	CAS No.	Analyte	Concentration	C Q	М
	7429-90-5	Aluminum		-	NR
	7440-36-0	Antimony			NR
	7440-38-2	Arsenic -		-	NR NR
	7440-39-3	Barium			NR
	7440-41-7	Beryllium			NR NR
	7440-43-9	Cadmium_			NR
	7440-70-2	Calcium		_	NR NR
	7440-47-3	Chromium_		_	NR NR
	7440-48-4	Cobalt_		_	NR NR
	7440-50-8	Copper		_	NR NR
	7439-89-6 7439-92-1	Iron		-	NR NR
	7439-92-1	Magnesium		-	$- \mathbf{N}\mathbf{R} $
	7439-95-4	Manganese	[-	
	7439-97-6	Mercury	0.04	_ <u></u> *	CV
	7440-02-0	Nickel -		-	- NR
	7440-09-7	Potassium		-	- NR
	7782-49-2	Selenium		-	NR
	7440-22-4	Silver		_	NR
	7440-23-5	Sodium		_	NR NR
	7440-28-0	Thallium		_	NR NR
	7440-62-2	Vanadium_			NR
	7440-66-6	Zinc			NR NR
		Cyanide			NR
r Before:		Clarit	y Before:		Texture:
r After:		Clarity	y After:		Artifacts:
ents:					
ieiils:					
					

FORM I - IN

INORGANIC ANALYSES DATA SHEET EPA SAMPLE NO.

Name: AQ	UATEC		Contract: 9	1082	K40428F
			O SAS No.	:	SDG No.: 42799_
Matrix (soil,	/water): FIS	H	•	Lab Samp	le ID: 213492
evel (low/me	ed): LOW_	_		Date Rece	eived: 03/09/94
Solids:	100.	0			•
	Concentration	Units (ug	/L or mg/kg dry	y weight):	: MG/KG
	CAS No.	Analyte	Concentration	C Q	м
	7429-90-5			_	NR
	7440-36-0 7440-38-2	Antimony_ Arsenic		-	NR NR
	7440-38-2	Barium	 -	-11	NR
	7440-41-7	Beryllium		-	NR
		Cadmium		-11	NR
		Calcium			NR
		Chromium			NR
		Cobalt			NR
	7440-50-8	Copper			NR
	7439-89-6	Iron			NR
	7439-92-1	Lead			NR
A	7439-95-4	Magnesium			NR
	7439-96-5	Manganese			NR
	7439-97-6	Mercury	0.05		CV
	7440-02-0	Nickel			NR .
		Potassium			NR
	7782-49-2	Selenium_			NR
	7440-22-4	Silver			NR
	7440-23-5	Sodium			NR
		Thallium			NR
		Vanadium_		_ .	NR
		Zinc			NR
		Cyanide			NR
				_}	1
lor Before:		Clarity	y Before:		Texture:
lor After:		Clarity	y After:		Artifacts:
mments:					

FORM I - IN

1 INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

Name: AQ	UATEC		Contract: 9	1082	2	K40428R
ab Code: AQ	UAI_ C	ase No.: BI	O SAS No.	: _		SDG No.: 42799_
atrix (soil	/water): FIS	H_		Lal	Sample	e ID: 213493
evel (low/m	ed): LOW_			Dat	e Recei	ived: 03/09/94
Solids:	100.	. 0				
•	Concentration	Units (ug	/L or mg/kg dr	y we	eight):	MG/KG
	CAS No.	Analyte	Concentration	С	Q M	1
	7429-90-5	Aluminum		- -	_N	īR
	7440-36-0	Antimony_		- -		iR
	7440-38-2	Arsenic		_ -	N	TR .
	7440-39-3	Barium				IR
	7440-41-7	Beryllium		_ _		R
	•	Cadmium_		_ _		IR
	7440-70-2	Calcium_		_ _		R
		Chromium_		_ _		R
	7440-48-4	Cobalt		- -		R
	7440-50-8	Copper		_ _		R
		Iron		l-I-		R
	7439-92-1	Lead		- -		R
	7439-95-4 7439-96-5	Magnesium				R R
	7439-96-5	Manganese	0.05	- <u>-</u>		
	7440-02-0	Mercury		- -	N*_C	V
	7440-02-0	Potassium		- -	N	
	7782-49-2	Selenium		- -	N	
	7440-22-4	Silver		- -	N	
	7440-23-5	Sodium		- -	N	
	7440-28-0	Thallium		- -	N	
	7440-62-2	Vanadium	············	- -	N	
	7440-66-6	Zinc		- -	N	
		Cyanide		-1-	N.	
lor Before:		Clarit	y Before:		T	-' exture:
lor After:		Clarity	y After:		A	rtifacts:
mments:						
						
						
		···				

FORM I - IN

INORGANIC ANALYSES DATA SHEET

N:	ame:	AQUATEC			Contract: 9	10	82	_ _	K40430F
					O SAS No.	:		s	DG No.: 42799
tri	c (sc	oil/wate	r): FIS	H		L	ab Samp	ole	ID: 214487
vel	(low	v/med):	LOW			D	ate Rec	eiv	ed: 03/20/94
Soli	ds:		100	. 0					
		Concer	ntration	u Units (ug	/L or mg/kg dr	y '	weight)	: M	G/KG
		CAS	No.	Analyte	Concentration	c	Q	М	
		743	9-90-5	Aluminum		-		NR	
			0-36-0	Antimony		-	Í	NR	
			0-38-2	Arsenic		-		NR	
			0-39-3	Barium		_		NR	
			0-41-7	Beryllium				NR	
				Cadmium_		_		NR	
			0-70-2	Calcium		-		NR	
			0-47-3 0-48-4	Chromium Cobalt		-		NR NR	
			0-50-8	Copper		-		NR	
			9-89-6	Iron				NR	
				Lead		-		NR	
		743	9-95-4	Magnesium		-		NR	
		743		Manganese				NR	
				Mercury_	0.08		\mathcal{I}_{N*}	CV	
			0-02-0	Nickel		_		NR	
			0-09-7	Potassium		_		NR	
			_	Selenium_		-1		NR	
				Sodium Sodium		-1		NR NR	
			0-28-0	Thallium		-		NR	
			0-62-2	Vanadium		-		NR	
			66-6	Zinc		-1		NR	
				Cyanide				NR	
		l	l	I.	/	_!		 	
or E	efor	:e:		Clarit	y Before:		•	Tex	ture:
or A	fter	:		Clarity	y After:			Art	ifacts:
ment	s:								
							 		
									
									

FORM I - IN

INORGANIC ANALYSES DATA SHEET EPA SAMPLE NO.

Name: AQ	UATEC		Contract: 9	108	2	K40430R
ab Code: AQI	UAI_ C	O SAS No.	: _		SDG No.: 42799	
atrix (soil,	/water): FIS	H_		Lai	b Samp	le ID: 214488
evel (low/me	ed): LOW_	_		Dat	te Rece	eived: 03/20/94
Solids:	100.	. 0				
C	Concentration	Units (ug	/L or mg/kg dr	y w	eight):	MG/KG
	CAS No.	Analyte	Concentration	С	Q	м
	7429-90-5	Aluminum		- -		NR
	7440-36-0	Antimony		- -		NR
	7440-38-2	Arsenic		_ -		NR
	7440-39-3	Barium				NR
	7440-41-7			_ _		NR
	7440-43-9 7440-70-2	Cadmium_		- -		NR
	7440-70-2	Calcium Chromium		- -		NR NR
		Cobalt		- -		NR NR
	7440-50-8	Copper		- -		NR
	7439-89-6	Iron	·	-1-		NR
		Lead		- -		NR
	7439-95-4	Magnesium				NR
		Manganese				NR
	7439-97-6	Mercury	0.05	-12		CV
	7440-02-0	Nickel		_[_		NR
	7440-09-7 7782-49-2	Potassium Selenium		-1-		NR
		Silver		-1-		NR NR
		Sodium		- -		NR
	7440-28-0	Thallium		- -		NR
		Vanadium		-1-		NR
	7440-66-6	Zinc		_ _		NR
		Cyanide		_ _	1	VR .
		I.		_ _		_!
lor Before:	 	Clarit	y Before:			Texture:
lor After:		Clarit	y After:		1	Artifacts:
mments:						
						
					·	· · · · · · · · · · · · · · · · · · ·
						

FORM I - IN

MISCELLANEOUS PARAMETERS

MISCELLANEOUS PARAMETERS

6			Fillet	% Lipids			
Sample ID	Description	Sex	Weight	Fillet	Remaining Carcass		
K40239	Small Mouth Bass	female	358g	0.90	2.29		
K40240	Small Mouth Bass	male	373g	2.27	4.43		
K40241	Small Mouth Bass	male	372g	2.33	5.12		
K40242	Small Mouth Bass	female	404g	1.48	4.20		
K40244	Small Mouth Bass	male	302g	1.26	2.19		
K40245	Small Mouth Bass	female	269g	0.96	3.24		
K40304	Small Mouth Bass	male	231g	0.96	5.78		
K40305	Small Mouth Bass	female	163g	1.63	3.01		
K40306	Small Mouth Bass	male	186g	0.36	1.50		
K40308	Small Mouth Bass	female	142g	1.59	3.60		
K40309	Small Mouth Bass	male	144g	0.52	1.84		
K40310	Carp	female	131g	1.19	4.11		
K40318	Carp	male	548g	1.05	1.01		
K40319	Carp	female	400g	0.86	2.25		
K40320	Carp	male	273g	2.24	4.88		
K40321	Carp	female	199g	5.65	8.77		
K40326	Carp	male	135g	1.04	3.08		
K40327	Carp	female	610g	3.07	4.82		
K40421	Carp	female	527g	0.81	1.72		
K40422	Carp	female	456g_	1.21	2.24		
K40423	Carp	female	543g	1.42	2.37		
K40427	Carp	male	308g	0.46	0.75		
K40428	Carp	male	400g	0.35	1.11		
K40430	Carp	male	496g	0.77	1.62		

DATA REVIEW FOR

ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER SUPERFUND SITE

PCB ANALYSES

TERRESTRIAL BIOTA - MICE

Analyses performed by:

Enseco-Wadsworth/ALERT North Canton, Ohio

Review performed by:

Blasland, Bouck & Lee, Inc. Syracuse, New York

Summary

The following is an assessment of the PCB data package for the Terrestrial Biota sampling of the Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site. Included with this assessment are the data review check sheets used in the review of the package and sample results for PCB and lipids analyses. Analyses were performed on the following samples:

Sample ID	Lab ID	Matrix	Sample Location
K44000	M4547102	white-footed mouse	TBSA #1
K44001	M4548102	white-footed mouse	TBSA #1
K44002	M4549102	white-footed mouse	TBSA #1
K44003	M4550102	white-footed mouse	TBSA #1
K44004	M4551102	white-footed mouse	TBSA #1
K44005	M4552102	white-footed mouse	TBSA #1
K44006	M4553102	white-footed mouse	TBSA #1
K44007	M4554102	white-footed mouse	TBSA #1
K44008	M4555102	white-footed mouse	TBSA #1
K44009	M4557102	white-footed mouse	TBSA #1
K44010	M4559102	white-footed mouse	TBSA #3
K44011	M4558102	white-footed mouse	TBSA #3
K44012	M4560102	white-footed mouse	TBSA #3
K44013	M4561102	white-footed mouse	TBSA #3
K44014	M4562102	white-footed mouse	TBSA #3
K44015	M4563102	white-footed mouse	TBSA #3
K44016	M4564102	white-footed mouse	TBSA #3
K44017	M4565102	white-footed mouse	TBSA #3
K44018	M4572102	white-footed mouse	TBSA #3
K44019	M4573102	white-footed mouse	TBSA #3
K44020	M4566102	white-footed mouse	TBSA #5
K44021	M4567102	white-footed mouse	TBSA #5
K44022	M4568102	white-footed mouse	TBSA #5
K44023	M4570102	white-footed mouse	TBSA #5
K44024	M4575102	white-footed mouse	TBSA #5
K44025	M4576102	white-footed mouse	TBSA #5
K44026	M4578102	white-footed mouse	TBSA #5
K44027	M4579102	white-footed mouse	TBSA #5

Sample ID	Lab ID	Matrix	Sample Location
K44028	M4580102	white-footed mouse	TBSA #5
K44029	M4581102	white-footed mouse	TBSA #5
K44030	M4582102	white-footed mouse	TBSA #11
K44031	M4584102	white-footed mouse	TBSA #11
K44032	M4585102	white-footed mouse	TBSA #11
K44033	M4586102	white-footed mouse	TBSA #11
K44034	M4587102	white-footed mouse	TBSA #11
K44034	M4588102	white-footed mouse	TBSA #11
K44036	M4589102	white-footed mouse	TBSA #11
K44037	M4590102	white-footed mouse	TBSA #11
K44037	M4591102	white-footed mouse	TBSA #11
K44039	M4593102	white-footed mouse	TBSA #11
K44040	M4594102	white-footed mouse	TBSA #10
K44041	M4595102	white-footed mouse	TBSA #10
K44042	M4596102	white-footed mouse	TBSA #10
K44043	M4597102	white-footed mouse	TBSA #10
K44044	M4598102	white-footed mouse	TBSA #10
K44045	M4599102	white-footed mouse	TBSA #10
K44046	M4600102	white-footed mouse	TBSA #10
K44047	M4601102	white-footed mouse	TBSA #10
K44048	M4602102	white-footed mouse	TBSA #10
K44049	M4603102	white-footed mouse	TBSA #10

Introduction

Analyses were performed according to the USEPA SW-846 method 8081, modified for PCB only analysis.

The data review process is intended to evaluate the data on a technical basis. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with National Functional Guidelines:

- U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
- J The compound was positively identified; however, the associated numerical value is an estimated concentration only.
- B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.
- N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.
- JN The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.
- E The compound was quantitated above the calibration range.
- D Concentration is based on a diluted sample analysis.
- UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.
- R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant QC problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC test, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

Data Assessment

1. Holding Time

There is no specified holding time for extraction of biota samples; however, all samples must be analyzed within 40 days of extraction. All samples were analyzed within the specified holding time.

2. Blank Contamination

Quality assurance blanks, i.e., method and instrument blanks, are prepared to identify any contamination which may have been introduced into the samples during sample preparation or analysis. Method blanks measure laboratory contamination during preparation. Instrument blanks measure instrument contamination and sample cross-contamination.

No target compounds were detected in the method blanks.

3. System Performance

The system performance was acceptable for both columns.

4. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of giving acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument is giving satisfactory daily performance.

4.1 Initial Calibration

The method allows a maximum RSD of 20%. The %RSD was within acceptable limits for all Aroclors.

4.2 Continuing Calibration

A maximum %D of 15 is allowed. All continuing calibrations were within the specified limits.

5. Surrogates / System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique.

Surrogate recoveries were within acceptable control limits for all samples.

6. Compound Identification

The retention times of identified Aroclor peaks must fall within the calculated retention time windows for both the primary and confirmation columns.

All peaks fell within the appropriate retention time windows.

The quantitated concentrations between the two columns were within the 25% difference limit for all identified Aroclors.

7. Matrix Spike/Matrix Spike Duplicate/Matrix Spike Blank

Matrix spike and matrix spike duplicate data are used to assess the precision and accuracy of the analytical method.

No matrix spike and matrix spike duplicate analyses were performed on the samples; however, several blank spikes were extracted and analyzed with the samples. Recoveries of the spike were all within acceptable limits.

8. System Performance and Overall Assessment

Overall system performance was acceptable. Other than those deviations specifically mentioned in this review, the overall data quality is within the quidelines listed in the analytical method.

DATA REVIEW CHECKLIST

PCB Data Review Checklist

	YES	NO	NA_
Data Completeness and Deliverables			
is there a narrative or cover letter present?	X		
Are the samples numbers included in the narrative?	X		
Are the sample chain-of-custodies present?	X		
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?		x	
Holding Times			
Have any holding times been exceeded?		X	
Surrogate Recovery			
Are surrogate recovery forms present?	X		
Are all the samples listed on the appropriate surrogate recovery form?	<u>X</u>		
Are the outliers correctly marked with an asterisk?	X		
Were recoveries of TCMX or DCB outside of specified limits for any sample or blank?		X	
If yes, were the samples reanalyzed?			X
Matrix Spikes			
Is there a matrix spike recovery form present?		X	
Were matrix spikes analyzed at the required frequency?		x	
How many spike recoveries were outside of QC limits?			
NA out of NA			
How many RPDs for matrix spike and matrix spike duplicate were outside of QC limits?			
NA out of NA			
Blanks			
Is a Method Blank Summary Form present?	X		
Has a method blank been analyzed for each set of samples or for each 20 samples, whichever is more frequent?	X		
Has an instrument blank been analyzed at the beginning of each 12 hour period following the initial calibration?		x	
			

PCB Data Review Checklist - Page 2

	YES	NO	NA
Is the chromatographic performance acceptable for each instrument?	<u> </u>		
Do any method/reagent/instrument blanks have positive results?		x	
Do any field/rinse blanks have positive results?			×
Are there field/rinse/equipment blanks associated with every sample?		x	
Calibration and GC Performance			
Are the following chromatograms and data printouts present?			
Aroclor 1016/1260	<u>X</u>		
Aroclor 1221	X		
Aroclor 1232	X		
Aroclor 1242	X		
Aroclor 1248	X		
Aroclor 1254	X		
Instrument Blanks		×	
Are Initial Calibration Summary Forms present and complete for each column and analytical sequence?	X		
Are the linearity criteria for the initial analyses within limits for both columns (20% RSD)	X		
Have all samples been injected within a 12 hour period beginning with the injection of an instrument blank?	x		
Is a Calibration Verification Summary Form present and complete for each continuing standard analyzed?	×		
Are %D values for all compounds within limits (less than 15%)?	X		
Analytical Sequence Check			
Is a analytical sequence form present and complete for each column and each period of analyses?	X		
Was the proper analytical sequence followed?	Х		

PCB Data Review Checklist - Page 3

	YES	NO	NA
Cleanup Efficiency Verification			
If GPC cleanup was performed, is Gel Permeation Chromatography Check Form present?			x
Are percent recoveries of the compounds used to check the efficiency of the cleanup procedure within QC limits?			x
PCB Identification			
Is a Form X present for every sample in which a PCB was detected?		x	
Is the percent difference (%D) calculated for the positive sample results on the two columns less than 25%?	x		
Were there any false negatives?		X	
Was GC/MS confirmation provided when required?			×
Compound Quantitation and Reported Detection Lim	its		
Are the reporting limits adjusted to reflect sample dilutions, and for soils, sample moisture?		X	
Chromatogram Quality	_		
Were the baselines stable?	X		
Were any electronegative displacement (negative peaks) or unusual peaks detected?		X	
Field Duplicates			
Where field duplicates submitted with the samples?		<u>X</u>	

PCB Holding Time and Surrogate Recovery Summary

Sample ID	Holding	Surrogates	- Golumn 1	Surrogates	- Column 2
	Time	TCX	DCB	тсх	DCB
K44000	ок	ок	ок	ок	ок
K44001					
K44002					
K44003					
K44004					
K44005					
K44006					
K44007				·	
K44008					
K44009					
K44010					
K44011					
K44012					
K44013					
K44014					
K44015					
K44016					
K44017					
K44018					
K44019					
K44020					
K44021					
K44022					
K44023					
K44024					
K44025					
K44026					
K44027					
K44028					
K44029					
K44030					
K44031					

Sample ID	Holding	Surrogates	- Column 1	Surrogates	- Column 2
	Time	тсх	DCB	тсх	OCB
K44032					
K44033					
K44034					
K44035					
K44036					
K44037					
K44038					
K44039					
K44040					
K44041					
K44042					
K44043					
K44044					
K44045					
K44046					
K44047					
K44048					
K44049					

Surrogate Standards TCX Tetrachloro-m-xylene DCB Decachlorobiphenyl

Qualifiers:

Surrogates diluted out D

Recovery high Recovery low

Unless otherwise noted, all parameters are within specified limits.

PCB Calibration Summary

Instrument: SA/SB Column: RTX-5

Date:	5/6/94	5/13	5/13	5/13	5/13	5/13	5/13
Run Number:		002	003	004	005	014	015
	initial Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont Cal.
	%RSD	% D	% 0	%D	%D	%D	% D
Arocior 1016	7.0		<u> </u>			·	
Aroclor 1221	7.9						
Aroclor 1232	7.9					4.0	
Aroclor 1242	8.3	10.0				ļ	
Arocior 1248	11.7		11.0				
Aroclor 1254	6.9			9.0			
Aroclor 1260	6.5				5.0		8.0
etrachioro-m-xylene		· ·					
Decachlorobiphenyl							
fected Samples:							
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Instrument:	SA/SB
Column:	RTX-5

Date:		5/14	5/14	5 <i>[</i> 14	5/14	5/15	5/15
Run Number:		027	028	039	040	049	050
	initial Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont Cal
	%ASD	% D	% D	%D	% D	%D	% D
Arocior 1016							
Aroclor 1221		9.0					
Aroclor 1232							
Arocior 1242						5.0	
Aroclor 1248				5.0			
Araclor 1254			5.0				6.0
Aroclor 1260					5.0		
Tetrachioro-m-xylene							
Decachlorobiphenyl							
Affected Samples:							

Instrument: SA/SB
Column: RTX-5

Date:		5/15	5/15	5/16	5/16	5/18	5/16
Run Number:		003	004	015	016	028	029
	initial Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.
	%RSD	%D	%D	%Đ	% D	%D	%D
Arocior 1016							<u> </u>
Aracior 1221							
Aroclor 1232		<u> </u>				5.0	<u> </u>
Arocior 1242				7.0		<u> </u>	
Arocior 1248			8.0				
Aroclor 1254					3.0	-	
Aroclor 1260		8.0			· <u>-</u>	: -	8.0
Tetrachioro-m-xylene							
Decachlorobiphenyl							
ffected Samples:							
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	·						
							<u> </u>
							<u> </u>
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Γ							

Instrument:	SA/SB
Column:	RTX-5

Date:		5/15	5/15		1		
Run Number:		036	037				
	Initial Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.
	%RSD	%D	%D	% D	% D	%D	% D
Aroclor 1016							
Aroclor 1221		7.0			<u> </u>		
Aroclor 1232					<u></u>		<u> </u>
Arocior 1242							
Aroclor 1248						<u> </u>	
Aroclor 1254			1.0				
Arocior 1260							
Tetrachioro-m-xylene						<u> </u>	
Decachlorobiphenyl							
Affected Samples:							
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Instrument: SA/SB

Date:	5/8/94	5/13	5/13	5/13	5/13	5/13	5/13
Run Number:		002	003	004	005	014	015
	initial Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.
	%RSD	% D-	%D	% D	% D	%D	% D
Aracior 1016	7.7						
Arocior 1221	12.5						
Aroclor 1232	5.0	i				3.0	
Aroclor 1242	6.0	12.0					
Aroclor 1248	9.3		11.0				
Aroclor 1254	4.0			7.0			
Aroclor 1260	6.8				4.0		5.0
Tetrachioro-m-xylene							
Decachlorobiphenyl							
ffected Samples:							

Instrument: SA/SB
Column: RTX-1701

Date:		5/14	5/14	5/14	- 5/14	5/15	5/15
Run Number:		027	028	039	040	049	050
	Initial Cat.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.
	%RSD	%D	%D	% D	% D	% D	% D
Aroclor 1016							
Aroclor 1221		4.0					
Aroclor 1232							
Aroclor 1242						3.0	
Arocior 1248				3.0			
Aroclor 1254			1.0				4.0
Aroclor 1260					2.0		
Tetrachloro-m-xylene							<u></u>
Decachiorobiphenyl							
Affected Samples:							

Instrument: <u>SA/SB</u>
Column: <u>RTX-1701</u>

Date:		5/15	5/15	5/16	5/16	5/16	5/16
Run Number:		003	004	015	016	028	029
	initiel Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.
	%RSD	%D	% D	% D	%0	% D	% D
Aroclor 1016			ļ				
Aroclor 1221							<u> </u>
Arocior 1232		·				7.0	
Aroclor 1242				7.0			
Aroclor 1248			7.0				<u> </u>
Aroclor 1254					3.0		
Aroclor 1260		7.0					7.0
Tetrachioro-m-xylene							
Decachlorobiphenyl							
ffected Samples:							
Γ							
Ī							

Instrument: SA/SB
Column: RTX-1701

Date:		5/15	5/15				
Run Number:		036	037				
	initial Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.
	%RSD	%D	% D	% 0	% D	%D	% D
Arocior 1016							
Aroclor 1221		3.0					
Aroclor 1232							
Aroclor 1242							
Arocior 1248		-					
Aroclor 1254			5.0				
Aroclor 1260							
Tetrachioro-m-xylene							
Decachlorobiphenyl							
Affected Samples:							

CORRECTED ANALYSIS SUMMARY FORMS

KR-SI-02-01 TBSA #1 WHITE-FOOTED MOUSE 9-30-94 4:50

WO #: M4547102 DATE SAMPLED:

LAB #: A4D260034-001

DATE RECEIVED:

9/30/93 4/26/94

MATRIX: TISSUE

PARAMETER	RESULT (mq/kq)	REPORTING LIMIT	METHOD	EXTRACTION- ANALYSIS DATE	QC <u>BATCH</u>
Aroclor-1016	ND	0.050	SW846 8080	05/09-05/13/94	4129075
Aroclor-1221	ND	0.030	SW846 8080	05/09-05/13/94	4129075
Aroclor-1232	ND	0 .050 -0.015	SW846 8080	05/09-05/13/94	4129075
Aroclor-1242	ND	0.050 0.025	SW846 8080	05/09-05/13/94	4129075
Aroclor-1248	ND	0.050.0.025	SW846 8080	05/09-05/13/94	4129075
Aroclor-1254	ND	0.050	SW846 8080	05/09-05/13/94	4129075
Aroclor-1260	0.064	0.050	SW846 8080	05/09-05/13/94	4129075

SURROGATE RECOVERY	<u>*</u>	ACCEPTABLE LIMITS
Decachlorobiphenyl	96	(60 - 150)
Tetrachloro-m-xylene	82	(60 - 150)

NOTE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT

KR-SI-03-02 TBSA #1 WHITE-FOOTED MOUSE 9-30-94 4:50

WO #: M4548102 DATE SAMPLED: 9/30/93
LAB #: A4D260034-002 DATE RECEIVED: 4/26/94

MATRIX: TISSUE

PARAMETER	RESULT (mg/kg)	REPORTING LIMIT	METHOD	EXTRACTION- ANALYSIS DATE	QC <u>BATCH</u>
Aroclor-1016	ND	0.050 0.025	SW846 8080	05/09-05/13/94	4129075
Aroclor-1221	ND	0.050- 0.025	SW846 8080	05/09-05/13/94	4129075
Aroclor-1232	ND	0.025	SW846 8080	05/09-05/13/94	4129075
Aroclor-1242	ND	0.050 0.025	SW846 8080	05/09-05/13/94	4129075
Aroclor-1248	ND	0 .050 0.025	SW846 8080	05/09-05/13/94	4129075
Aroclor-1254	ND	0.050	SW846 8080	05/09-05/13/94	4129075
Aroclor-1260 0.027J	- ND -	0.050	SW846 8080	05/09-05/13/94	4129075

SURROGATE RECOVERY	<u> </u>	ACCEPTABLE LIMITS
Decachlorobiphenyl	97	(60 - 150)
Tetrachloro-m-xylene	81	(60 - 150)

NOTE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT

KR-SI-12-03 TBSA #1 WHITE-FOOTED MOUSE 9-30-94 4:50

WO #: M4549102 DATE SAMPLED: 9/30/93
LAB #: A4D260034-003 DATE RECEIVED: 4/26/94

MATRIX: TISSUE

PARAMETER	RESULT (mg/kg)	REPORTING LIMIT	METHOD	EXTRACTION - ANALYSIS DATE	QC <u>BATCH</u>
Aroclor-1016	ND	0.050.0.043	SW846 8080	05/09-05/13/94	4129075
Aroclor-1221	ND	0 .050 0.043	SW846 8080	05/09-05/13/94	4129075
Aroclor-1232	ND	0.050 0.043	SW846 8080	05/09-05/13/94	4129075
Aroclor-1242	ND	6.050 0.043	SW846 8080	05/09-05/13/94	4129075
Aroclor-1248	ND	० .०५० ०.० ^{:५} ३	SW846 8080	05/09-05/13/94	4129075
Aroclor-1254	ND	0.086	SW846 8080	05/09-05/13/94	4129075
Aroclor-1260	0.35	0.086	SW846 8080	05/09-05/13/94	4129075

SURROGATE RECOVERY	<u>*</u>	ACCEPTABLE LIMITS
Decachlorobiphenyl	96	(60 - 150)
Tetrachloro-m-xylene	87	(60 - 150)

NOTE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT
ELEVATED DETECTION LIMITS FOR AROCLOR-1254 AND AROCLOR-1260 DUE TO
LIMITED SAMPLE VOLUME

KR-SI-25-04 TBSA #1 WHITE-FOOTED MOUSE 9-30-94 4:50

WO #: M4550102 DATE SAMPLED: 9/30/93
LAB #: A4D260034-004 DATE RECEIVED: 4/26/94

MATRIX: TISSUE

PARAMETER	-	RESULT (mg/kg)	REPORTING LIMIT	METHOD	EXTRACTION - ANALYSIS DATE	QC <u>BATCH</u>
Aroclor-1016		ND	6.050 O.033	SW846 8080	05/09-05/13/94	4129075
Aroclor-1221		ND	0:050	SW846 8080	05/09-05/13/94	4129075
Aroclor-1232		ND	0.050	SW846 8080	05/09-05/13/94	4129075
Aroclor-1242		ND	0.050	SW846 8080	05/09-05/13/94	4129075
Aroclor-1248		ND	0 :050	SW846 8080	05/09-05/13/94	4129075
Aroclor-1254		ND	0.066	SW846 8080	05/09-05/13/94	4129075
Aroclor-1260	0.0113	ND-	0.066	SW846 8080	05/09-05/13/94	4129075

SURROGATE RECOVERY	<u>*</u>	ACCEPTABLE LIMITS
Decachlorobiphenyl	100	(60 - 150)
Tetrachloro-m-xylene	80	(60 - 150)

E: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT
ELEVATED DETECTION LIMITS FOR AROCLOR-1254 AND AROCLOR-1260 DUE TO
LIMITED SAMPLE VOLUME

KR-SI-15-05 TBSA #1 WHITE-FOOTED MOUSE 9-30-94 4:50

WO #: M4551102 DATE SAMPLED:

9/30/93 LAB #: A4D260034-005 DATE RECEIVED: 4/26/94

MATRIX: TISSUE

PARAMETER	RESULT (mg/kg)	REPORTING LIMIT	METHOD	EXTRACTION - ANALYSIS DATE	QC <u>BATCH</u>
Aroclor-1016	ND	0.030	SW846 8080	05/09-05/13/94	4129075
Aroclor-1221	ND	0.050	SW846 8080	05/09-05/13/94	4129075
Aroclor-1232	ND	0:050	SW846 8080	05/09-05/13/94	4129075
Aroclor-1242	ND	0:050	SW846 8080	05/09-05/13/94	4129075
Aroclor-1248	ND	0 .050 4	SW846 8080	05/09-05/13/94	4129075
Aroclor-1254	ND	0.059	SW846 8080	05/09-05/13/94	4129075
Aroclor-1260	ND	0.059	SW846 8080	05/09-05/13/94	4129075

SURROGATE RECOVERY	<u>\$</u>	ACCEPTABLE LIMITS
Decachlorobiphenyl	91	(60 - 150)
Tetrachloro-m-xylene	85	(60 - 150)

E: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT ELEVATED DETECTION LIMITS FOR AROCLOR-1254 AND AROCLOR-1260 DUE TO LIMITED SAMPLE VOLUME

KR-SI-22-07 TBSA #1 WHITE-FOOTED MOUSE 9-30-94 4:50

WO #: M4552102 DATE SAMPLED: 9/30/93 LAB #: A4D260034-006 DATE RECEIVED: 4/26/94

MATRIX: TISSUE

PARAMETER	RESULT (mg/kg)	REPORTING LIMIT	METHOD	EXTRACTION- ANALYSIS DATE	QC <u>BATCH</u>
Aroclor-1016	ND	0.024	SW846 8080	05/09-05/13/94	4129075
Aroclor-1221	ND	0 .050 0.524	SW846 8080	05/09-05/13/94	4129075
Aroclor-1232	ND	0 -050 0.024	SW846 8080	05/09-05/13/94	4129075
Aroclor-1242	ND	0 .050 0.024	SW846 8080	05/09-05/13/94	4129075
Aroclor-1248	ND	0.030 0.024	SW846 8080	05/09-05/13/94	4129075
Aroclor-1254	ND	840.0 050.0	SW846 8080	05/09-05/13/94	4129075
Aroclor-1260	ND	849.0 0.048	SW846 8080	05/09-05/13/94	4129075

SURROGATE RECOVERY	<u>*</u>	ACCEPTABLE LIMITS
Decachlorobiphenyl	10 4	(60 - 150)
Tetrachloro-m-xylene	85	(60 - 150)

E: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT

KR-SI-34-08 TBSA #1 WHITE-FOOTED MOUSE 9-30-94 4:50

WO #: M4553102 DATE SAMPLED: 9/30/93
LAB #: A4D260034-007 DATE RECEIVED: 4/26/94

MATRIX: TISSUE

PARAMETER	_	RESULT (mg/kg)	REPORTING LIMIT	METHOD	EXTRACTION - ANALYSIS DATE	QC <u>BATCH</u>
Aroclor-1016		ND	0.050 0.032	SW846 8080	05/09-05/13/94	4129075
Aroclor-1221		ND	0.050 ი.მპ	SW846 8080	05/09-05/13/94	4129075
Aroclor-1232		ND	0.050 ⊙.⊙3∑	SW846 8080	05/09-05/13/94	4129075
Aroclor-1242		ND	0.050 0.032	SW846 8080	05/09-05/13/94	4129075
Aroclor-1248		ND	0.032	SW846 8080	05/09-05/13/94	4129075
Aroclor-1254		ND	0.064	SW846 8080	05/09-05/13/94	4129075
Aroclor-1260	0.0293	-ND -	0.064	SW846 8080	05/09-05/13/94	4129075

Decachlorobiphenyl 88 Tetrachloro-m-xylene 84	(60 - 150) (60 - 150)

E: AS RECEIVED

KR-SI-42-10 TBSA #1 WHITE-FOOTED MOUSE 9-30-94 4:50

WO #: M4554102 DATE SAMPLED: 9/30/93 LAB #: A4D260034-008 DATE RECEIVED: 4/26/94

MATRIX: TISSUE

PARAMETER	-	RESULT (mg/kg)	REPORTING LIMIT	METHOD	EXTRACTION- ANALYSIS DATE	QC BATCH
Aroclor-1016		ND	0.030. 0.033	SW846 8080	05/09-05/13/94	4129075
Aroclor-1221		ND	\$50.0 BEB.Q	SW846 8080	05/09-05/13/94	4129075
Aroclor-1232		ND	0.033	SW846 8080	05/09-05/13/94	4129075
Aroclor-1242		ND	0.050 0.033	SW846 8080	05/09-05/13/94	4129075
Aroclor-1248		ND	€€0.0 020. 0	SW846 8080	05/09-05/13/94	4129075
Aroclor-1254		ND	0.066	SW846 8080	05/09-05/13/94	4129075
Aroclor-1260	0.0207	N D-	0.066	SW846 8080	05/09-05/13/94	4129075

SURROGATE RECOVERY	ž	ACCEPTABLE LIMITS
Decachlorobiphenyl	92	(60 - 150)
Tetrachloro-m-xylene	79	(60 - 150)

E AS RECEIVED

KR-SI-20-11 TBSA #1 WHITE-FOOTED MOUSE 9-30-94 4:50

WO #: M4555102 DATE SAMPLED: 9/30/93 LAB #: A4D260034-009 DATE RECEIVED: 4/26/94

MATRIX: TISSUE

PARAMETER	RESULT (mq/kq)	REPORTING LIMIT	METHOD	EXTRACTION- ANALYSIS DATE	QC <u>BATCH</u>
Aroclor-1016	ND	0.050 0.030	SW846 8080	05/09-05/13/94	4129075
Aroclor-1221	ND	0.050 0.030	SW846 8080	05/09-05/13/94	4129075
Aroclor-1232	ND	050.0 050. 0	SW846 8080	05/09-05/13/94	4129075
Aroclor-1242	ND	0.030	SW846 8080	05/09-05/13/94	4129075
Aroclor-1248	ND	0 .050 .0.030	SW846 8080	05/09-05/13/94	4129075
Aroclor-1254	ND	0.061	SW846 8080	05/09-05/13/94	4129075
Aroclor-1260	0.077	0.061	SW846 8080	05/09-05/13/94	4129075

SURROGATE RECOVERY	<u>*</u>	ACCEPTABLE LIMITS
Decachlorobiphenyl	101	(60 - 150)
Tetrachloro-m-xylene	78	(60 - 150)

TE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT
ELEVATED DETECTION LIMITS FOR AROCLOR-1254 AND AROCLOR-1260 DUE TO
LIMITED SAMPLE VOLUME

KR-SI-22-12 TBSA #1 WHITE-FOOTED MOUSE 9-30-94 4:50

WO #: M4557102 DATE SAMPLED: 9/30/93
LAB #: A4D260034-010 DATE RECEIVED: 4/26/94

MATRIX: TISSUE

PARAMETER	RESULT (mg/kg)	REPORTING LIMIT	METHOD	EXTRACTION - ANALYSIS DATE	QC <u>BATCH</u>
Aroclor-1016	ND	PEO.0 020.0	SW846 8080	05/09-05/14/94	4129075
Aroclor-1221	ND	150.0000	SW846 8080	05/09-05/14/94	4129075
Aroclor-1232	ND	450.0000	SW846 8080	05/09-05/14/94	4129075
Aroclor-1242	ND	0.054	SW846 8080	05/09-05/14/94	4129075
Aroclor-1248	ND	0.034	SW846 8080	05/09-05/14/94	4129075
Aroclor-1254	ND	0.067	SW846 8080	05/09-05/14/94	4129075
Aroclor-1260	0.0452 ND	0.067	SW846 8080	05/09-05/14/94	4129075

SURROGATE RECOVERY	<u>*</u>	ACCEPTABLE LIMITS
Decachlorobiphenyl	104	(60 - 150)
Tetrachloro-m-xylene	93	(60 - 150)

YIE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT
ELEVATED DETECTION LIMITS FOR AROCLOR-1254 AND AROCLOR-1260 DUE TO
LIMITED SAMPLE VOLUME

KR-SIII-46-13 TBSA #3/WHITE-FOOTED MOUSE 10-8-94 5:45

WO #: M4559102

DATE SAMPLED: LAB #: A4D260034-012

10/08/93 DATE RECEIVED: 4/26/94

MATRIX: TISSUE

- - - - - GC Semi-Volatiles - - - - - - -

PARAMETER	RESULT (mg/kg)	REPORTING LIMIT	METHOD	EXTRACTION- ANALYSIS DATE	QC BATCH
Aroclor-1016	ND	0 .050 0.035	SW846 8080	05/09-05/14/94	4129075
Aroclor-1221	ND .	250.00055	SW846 8080	05/09-05/14/94	4129075
Aroclor-1232	ND	0.050 6.035	SW846 8080	05/09-05/14/94	4129075
Aroclor-1242	ND	0.035	SW846 8080	05/09-05/14/94	4129075
Aroclor-1248	ND	0 .050 0.035	SW846 8080	05/09-05/14/94	4129075
Aroclor-1254	ND	0.070	SW846 8080	05/09-05/14/94	4129075
Aroclor-1260	0.17	0.070	SW846 8080	05/09-05/14/94	4129075

SURROGATE RECOVERY	<u>*</u>	ACCEPTABLE LIMITS
Decachlorobiphenyl	90	(60 - 150)
Tetrachloro-m-xylene	81	(60 - 150)

AS RECEIVED

KR-SIII-24-14

WO #: M4558102

LAB #: A4D260034-011

MATRIX: TISSUE

DATE SAMPLED:

9/30/93

DATE RECEIVED:

4/26/94

PARAMETER	RESULT (mg/kg)	REPORTING LIMIT	METHOD	EXTRACTION- ANALYSIS DATE	QC <u>BATCH</u>
Aroclor-1016	ND	0.019	SW846 8080	05/09-05/14/94	4129075
Aroclor-1221	ND	0.029	SW846 8080	05/09-05/14/94	4129075
Aroclor-1232	ND	0.050 0.029	SW846 8080	05/09-05/14/94	4129075
Aroclor-1242	ND	0.050 0.029	SW846 8080	05/09-05/14/94	4129075
Aroclor-1248	ND	0.029	SW846 8080	05/09-05/14/94	4129075
Aroclor-1254	ND	0.059	SW846 8080	05/09-05/14/94	4129075
Aroclor-1260	0.076	0.059	SW846 8080	05/09-05/14/94	4129075

SURROGATE RECOVERY	<u>\$</u>	ACCEPTABLE LIMITS
Decachlorobiphenyl	97	(60 - 150)
Tetrachloro-m-xylene	76	(60 - 150)

KR-SIII-23-18 TBSA #3/WHITE-FOOTED MOUSE 10-8-94 5:45

WO #: M4560102 DATE SAMPLED:

10/08/93 LAB #: A4D260034-013 DATE RECEIVED: 4/26/94

MATRIX: TISSUE

- - - - - - - GC Semi-Volatiles - - - - - -

PARAMETER	RESULT (mg/kg)	REPORTING LIMIT	METHOD	EXTRACTION- ANALYSIS DATE	QC BATCH
Aroclor-1016	ND	0.050 0.045	SW846 8080	05/09-05/14/94	4129075
Aroclor-1221	ND	0.050 0.045	SW846 8080	05/09-05/14/94	4129075
Aroclor-1232	ND	2.050 0.045	SW846 8080	05/09-05/14/94	4129075
Aroclor-1242	ND	0.050 0.045	SW846 8080	05/09-05/14/94	4129075
Aroclor-1248	ND	0.050 0.045	SW846 8080	05/09-05/14/94	4129075
Aroclor-1254	ND	0.090	SW846 8080	05/09-05/14/94	4129075
Aroclor-1260	ND	0.090	SW846 8080	05/09-05/14/94	4129075

SURROGATE RECOVERY	<u>*</u>	ACCEPTABLE LIMITS
Decachlorobiphenyl Tetrachloro-m-xylene	95 81	(60 - 150) (60 - 150)

E: AS RECEIVED

KR-SIII-46-19 TBSA #3/WHITE-FOOTED MOUSE 10-8-94 5:45

WO #: M4561102 DATE SAMPLED: 10/08/93
LAB #: A4D260034-014 DATE RECEIVED: 4/26/94

MATRIX: TISSUE

PARAMETER	RESULT (mg/kg)	RBPORTING LIMIT	METHOD	EXTRACTION - ANALYSIS DATE	QC <u>BATCH</u>
Aroclor-1016	ND	0 .050	SW846 8080	05/09-05/14/94	4129075
Aroclor-1221	ND	0.050 0.036	SW846 8080	05/09-05/14/94	4129075
Aroclor-1232	ND	0.050	SW846 8080	05/09-05/14/94	4129075
Aroclor-1242	ND	0.050 O.03C	SW846 8080	05/09-05/14/94	4129075
Aroclor-1248	ND	0_050 0.036	SW846 8080	05/09-05/14/94	4129075
Aroclor-1254	ND	0.073	SW846 8080	05/09-05/14/94	4129075
Aroclor-1260	0.45	0.073	SW846 8080	05/09-05/14/94	4129075

SURROGATE RECOVERY	<u>\$</u>	ACCEPTABLE LIMITS
Decachlorobiphenyl	98	(60 - 150)
Tetrachloro-m-xylene	85	(60 - 150)

TE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT
ELEVATED DETECTION LIMITS FOR AROCLOR-1254 AND AROCLOR-1260 DUE TO
LIMITED SAMPLE VOLUME

KR-SIII-03-20 TBSA #3/WHITE-FOOTED MOUSE 10-8-94 5:45

WO #: M4562102 DATE SAMPLED: 10/08/93
LAB #: A4D260034-015 DATE RECEIVED: 4/26/94

MATRIX: TISSUE

PARAMETER	RESULT (mg/kg)	REPORTING LIMIT	METHOD	EXTRACTION - ANALYSIS DATE	QC <u>BATCH</u>
Aroclor-1016	ND	0.050 0.033	SW846 8080	05/09-05/14/94	4129075
Aroclor-1221	ND	660.0 050.0	SW846 8080	05/09-05/14/94	4129075
Aroclor-1232	ND	0.033	SW846 8080	05/09-05/14/94	4129075
Aroclor-1242	ND	€0.0 -050. 0	SW846 8080	05/09-05/14/94	4129075
Aroclor-1248	ND	0.050 0.033	SW846 8080	05/09-05/14/94	4129075
Aroclor-1254	ND	0.066	SW846 8080	05/09-05/14/94	4129075
Aroclor-1260	ND	0.066	SW846 8080	05/09-05/14/94	4129075

SURROGATE RECOVERY	<u>*</u>	ACCEPTABLE LIMITS
Decachlorobiphenyl	92	(60 - 150)
Tetrachloro-m-xylene	86	(60 - 150)

² AS RECEIVED

KR-SIII-06-21 TBSA #3/WHITE-FOOTED MOUSE 10-8-94 5:45

WO #: M4563102 DATE SAMPLED: 10/08/93
LAB #: A4D260034-016 DATE RECEIVED: 4/26/94

MATRIX: TISSUE

PARAMETER	RESULT (mg/kg)	REPORTING LIMIT	METHOD	EXTRACTION- ANALYSIS DATE	QC BATCH
Aroclor-1016	ND	0 .050 0.025	SW846 8080	05/09-05/14/94	4129075
Aroclor-1221	ND	0.050 0.026	SW846 8080	05/09-05/14/94	4129075
Aroclor-1232	ND	0 .050 م.0س	SW846 8080	05/09-05/14/94	4129075
Aroclor-1242	ND	0.050 0.026	SW846 8080	05/09-05/14/94	4129075
Aroclor-1248	ND	0.050.0.026	SW846 8080	05/09-05/14/94	4129075
Aroclor-1254	ND	0.051	SW846 8080	05/09-05/14/94	4129075
Aroclor-1260	0.063	0.051	SW846 8080	05/09-05/14/94	4129075

SURROGATE RECOVERY	<u>*</u>	ACCEPTABLE LIMITS
Decachlorobiphenyl	97	(60 - 150)
Tetrachloro-m-xylene	90	(60 - 150)

^{&#}x27;as received

ND NOT DETECTED AT THE STATED REPORTING LIMIT
ELEVATED DETECTION LIMITS FOR AROCLOR-1254 AND AROCLOR-1264 DUE TO
LIMITED SAMPLE VOLUME

KR-SIII-42-26 TBSA #3/WHITE-FOOTED MOUSE 10-8-94 5:45

WO #: M4564102 DATE SAM

DATE SAMPLED:

10/08/93

LAB #: A4D260034-017

DATE RECEIVED:

4/26/94

MATRIX: TISSUE

PARAMETER	RESULT (mg/kg)	REPORTING LIMIT	METHOD	EXTRACTION- ANALYSIS DATE	QC <u>BATCH</u>
Aroclor-1016	ND	250.0000	SW846 8080	05/09-05/14/94	4129075
Aroclor-1221	ND	0:050 0.036	SW846 8080	05/09-05/14/94	4129075
Aroclor-1232	ND	0.036	SW846 8080	05/09-05/14/94	4129075
Aroclor-1242	ND	0,058 Ø.○36	SW846 8080	05/09-05/14/94	4129075
Aroclor-1248	ND	0.05 0 ⊙.03⊾	SW846 8080	05/09-05/14/94	4129075
Aroclor-1254	ND	0.071	SW846 8080	05/09-05/14/94	4129075
Aroclor-1260	0.15	0.071	SW846 8080	05/09-05/14/94	4129075

SURROGATE RECOVERY	<u>*</u>	ACCEPTABLE LIMITS
Decachlorobiphenyl Tetrachloro-m-xylene	100 86	(60 - 150) (60 - 150)

² AS RECEIVED

KR-SIII-10-27 TBSA #3/WHITE-FOOTED MOUSE 10-8-94 5:45

WO #: M4565102 DATE SAMPLED: 10/08/93
LAB #: A4D260034-018 DATE RECEIVED: 4/26/94

MATRIX: TISSUE

PARAMETER	RESULT (mg/kg)	REPORTING LIMIT	METHOD	EXTRACTION - ANALYSIS DATE	QC <u>BATCH</u>
Aroclor-1016	ND	0.050 0.023	SW846 8080	05/09-05/14/94	4129075
Aroclor-1221	ND	0.050 0.073	SW846 8080	05/09-05/14/94	4129075
Aroclor-1232	ND	<u>0.050</u> 0.023	SW846 8080	05/09-05/14/94	4129075
Aroclor-1242	ND	0.050 0.023	SW846 8080	05/09-05/14/94	4129075
Aroclor-1248	ND	0.050 0.023	SW846 8080	05/09-05/14/94	4129075
Aroclor-1254	ND	0.050 0.046	SW846 8080	05/09-05/14/94	4129075
Aroclor-1260	0.0175 #	٥.050 ٥٠٠٠	SW846 8080	05/09-05/14/94	4129075

SURROGATE RECOVERY	ł	ACCEPTABLE LIMITS
Decachlorobiphenyl	105	(60 - 150)
Tetrachloro-m-xylene	98	(60 - 150)

AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT

KR-SIII-28-28 TBSA #3/WHITE-FOOTED MICE 10-13-94 4:00

WO #: M4572102 DATE SAMPLED: 10/13/93
LAB #: A4D260034-023 DATE RECEIVED: 4/26/94

MATRIX: TISSUE

PARAMETER	RESULT (mg/kg)	REPORTING LIMIT	METHOD	EXTRACTION - ANALYSIS DATE	QC <u>BATCH</u>
Aroclor-1016	ND	0.050.0.042	SW846 8080	05/09-05/16/94	4129076
Aroclor-1221	ND	D-0500.042	SW846 8080	05/09-05/16/94	4129076
Aroclor-1232	ND	-0:050.0045	SW846 8080	05/09-05/16/94	4129076
Aroclor-1242	ND	0.050 O.C42	SW846 8080	05/09-05/16/94	4129076
Aroclor-1248	ND	0-050-0-04Z	SW846 8080	05/09-05/16/94	4129076
Aroclor-1254	ND	0.084	SW846 8080	05/09-05/16/94	4129076
Aroclor-1260	0.13	0.084	SW846 8080	05/09-05/16/94	4129076

SURROGATE RECOVERY	ž	ACCEPTABLE LIMITS
Decachlorobiphenyl	96	(60 - 150)
Tetrachloro-m-xylene	87	(60 - 150)

² AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT
ELEVATED DETECTION LIMITS FOR ARCCLOR-1254 AND ARCCLOR-1260 DUE TO
LIMITED SAMPLE VOLUME

KR-SIII-17-29 TBSA #3/WHITE-FOOTED MICE 10-13-94 4:00

WO #: M4573102 DATE SAMPLED: 10/13/93
LAB #: A4D260034-024 DATE RECEIVED: 4/26/94

MATRIX: TISSUE

PARAMETER	RESULT (mg/kg)	REPORTING LIMIT	METHOD	EXTRACTION - ANALYSIS DATE	QC <u>BATCH</u>
Aroclor-1016	ND	0.050 0.046	SW846 8080	05/09-05/16/94	4129076
Aroclor-1221	ND	2.050 0.046	SW846 8080	05/09-05/16/94	4129076
Aroclor-1232	ND	0.050 0.046	SW846 8080	05/09-05/16/94	4129076
Aroclor-1242	ND	0.050 0.046	SW846 8080	05/09-05/16/94	4129076
Aroclor-1248	ND	0.050 O.CUK	SW846 8080	05/09-05/16/94	4129076
Aroclor-1254	ND	0.091	SW846 8080	05/09-05/16/94	4129076
Aroclor-1260	0.10	0.091	SW846 8080	05/09-05/16/94	4129076

SURROGATE RECOVERY	ž	ACCEPTABLE LIMITS
Decachlorobiphenyl	99	(60 - 150)
Tetrachloro-m-xylene	90	(60 - 150)



NO NOT DETECTED AT THE STATED REPORTING LIMIT
ELEVATED DETECTION LIMITS FOR AROCLOR-1254 AND AROCLOR-1260 DUE TO
LIMITED SAMPLE VOLUME

KR-SV-18-22 TBSA #5/WHITE-FOOTED MOUSE 10-8-94 5:45

WO #: M4566102

DATE SAMPLED:

10/08/93

LAB #: A4D260034-019

DATE RECEIVED:

4/26/94

MATRIX: TISSUE

PARAMETER	RESULT (mq/kq)	REPORTING LIMIT	METHOD	EXTRACTION- ANALYSIS DATE	QC BATCH
Aroclor-1016	ND	0.050 0.042	. SW846 8080	05/09-05/14/94	4129075
Aroclor-1221	ND	0.042	SW846 8080	05/09-05/14/94	4129075
Aroclor-1232	ND	0-050 0.042	SW846 8080	05/09-05/14/94	4129075
Aroclor-1242	ND	0.042	SW846 8080	05/09-05/14/94	4129075
Aroclor-1248	ND	0.050 0.042	SW846 8080	05/09-05/14/94	4129075
Aroclor-1254	ND	0.083	SW846 8080	05/09-05/14/94	4129075
Aroclor-1260	0.30	0.083	SW846 8080	05/09-05/14/94	4129075

SURROGATE RECOVERY	Ł	ACCEPTABLE LIMITS
Decachlorobiphenyl	99	(60 - 150)
Tetrachloro-m-xylene	94	(60 - 150)

KR-SV-13-23 TBSA #5/WHITE-FOOTED MOUSE 10-8-94 5:45

WO #: M4567102 DATE SAMPLED: 10/08/93

LAB #: A4D260034-020 DATE RECEIVED: 4/26/94

MATRIX: TISSUE

<u>PARAMETER</u>	RESULT (mq/kq)	REPORTING LIMIT	METHOD	EXTRACTION- ANALYSIS DATE	QC <u>BATCH</u>
Aroclor-1016 Aroclor-1221 Aroclor-1232	ND ND ND	0 .050 0.022 0.050 0.022 0.050 0.022	SW846 8080	05/09-05/14/94 05/09-05/14/94 05/09-05/14/94	4129075
Aroclor-1242 Aroclor-1248 Aroclor-1254	ND ND ND	0.050 0.022 0.050 0.022 0.050 0.044	SW846 8080	05/09-05/14/94 05/09-05/14/94 05/09-05/14/94	4129075
Aroclor-1260	0.35	0.050 0.044	SW846 8080	05/09-05/14/94	4129075

SURROGATE RECOVERY	<u>\$</u>	ACCEPTABLE LIMITS
Decachlorobiphenyl	118	(60 - 150)
Tetrachloro-m-xylene	104	(60 - 150)

[:] AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT

KR-SV-29-24 TBSA #5/WHITE-FOOTED MOUSE 10-8-94 5:45

WO #: M4568102 DATE SAMPLED: 10/08/93
LAB #: A4D260034-021 DATE RECEIVED: 4/26/94

MATRIX: TISSUE

PARAMETER	RESULT (mg/kg)	REPORTING LIMIT	METHOD	EXTRACTION - ANALYSIS DATE	QC <u>BATCH</u>
Aroclor-1016	ND	0.050 0.037	SW846 8080	05/09-05/14/94	4129075
Aroclor-1221	ND	0.037	SW846 8080	05/09-05/14/94	4129075
Aroclor-1232	ND	-0.050 0.037	SW846 8080	05/09-05/14/94	4129075
Aroclor-1242	ND	0:0500.037	SW846 8080	05/09-05/14/94	4129075
Aroclor-1248	ND	D-050 0.037	SW846 8080	05/09-05/14/94	4129075
Aroclor-1254	ND	0.075	SW846 8080	05/09-05/14/94	4129075
Aroclor-1260	0.29	0.075	SW846 8080	05/09-05/14/94	4129075

SURROGATE RECOVERY	¥	ACCEPTABLE LIMITS
Decachlorobiphenyl	9 4	(60 - 150)
Tetrachloro-m-xylene	90	(60 - 150)

E: AS RECEIVED

KR-SV-37-25 TBSA #5/WHITE-FOOTED MOUSE 10-8-94 5:45

WO #: M4570102 DATE SAMPLED: 10/08/93 LAB #: A4D260034-022 DATE RECEIVED: 4/26/94

MATRIX: TISSUE

PARAMETER	RESULT (mg/kg)	REPORTING LIMIT	METHOD	EXTRACTION- ANALYSIS DATE	QC <u>BATCH</u>
Aroclor-1016	ND	0.050 0.012	SW846 8080	05/09-05/15/94	4129076
Aroclor-1221	ND	0.050 0.022	SW846 8080	05/09-05/15/94	4129076
Aroclor-1232	ND	0.050 0.022	SW846 8080	05/09-05/15/94	4129076
Aroclor-1242	ND	0.050 0.022	SW846 8080	05/09-05/15/94	4129076
Aroclor-1248	ND	0:050 ○.○2 ∠	SW846 8080	05/09-05/15/94	4129076
Aroclor-1254	ND	-0.050;0.043	SW846 8080	05/09-05/15/94	4129076
Aroclor-1260	0.27	0.050 0.043	SW846 8080	05/09-05/15/94	4129076

SURROGATE RECOVERY	<u>\$</u>	ACCEPTABLE LIMITS
Decachlorobiphenyl	99	(60 - 150)
Tetrachloro-m-xylene	88	(60 - 150)

E: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT

KR-SV-27-30 TBSA #5/WHITE-FOOTED MICE 10-13-94 4:00

WO #: M4575102

DATE SAMPLED: 10/13/93 LAB #: A4D260034-025 DATE RECEIVED: 4/26/94

MATRIX: TISSUE

PARAMETER	RESULT (mg/kg)	REPORTING LIMIT	METHOD	EXTRACTION- ANALYSIS DATE	QC <u>BATCH</u>
Aroclor-1016	ND	0.050 0.034	SW846 8080	05/09-05/16/94	4129076
Aroclor-1221	ND	450.000000	SW846 8080	05/09-05/16/94	4129076
Aroclor-1232	ND	0.050 0.034	SW846 8080	05/09-05/16/94	4129076
Aroclor-1242	ND	0.050 0.034	SW846 8080	05/09-05/16/94	4129076
Aroclor-1248	ND	0.050.0.034	SW846 8080	05/09-05/16/94	4129076
Aroclor-1254	ND	0.069	SW846 8080	05/09-05/16/94	4129076
Aroclor-1260	0.34	0.069	SW846 8080	05/09-05/16/94	4129076

SURROGATE RECOVERY	<u>\$</u>	ACCEPTABLE LIMITS		
Decachlorobiphenyl	97	(60 - 150)		
Tetrachloro-m-xylene	86	(60 - 150)		

: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT ELEVATED DETECTION LIMITS FOR AROCLOR-1254 AND AROCLOR-1260 DUE TO LIMITED SAMPLE VOLUME

KR-SV-26-31 TBSA #5/WHITE-FOOTED MICE 10-13-94 4:00

WO #: M4576102 DATE SAMPLED: 10/13/93
LAB #: A4D260034-026 DATE RECEIVED: 4/26/94

MATRIX: TISSUE

PARAMETER	RESULT (mq/kq)	REPORTING LIMIT	METHOD	EXTRACTION- ANALYSIS DATE	QC <u>BATCH</u>
Aroclor-1016	ND	0.050 0.031	SW846 8080	05/09-05/16/94	4129076
Aroclor-1221	ND	0.031	SW846 8080	05/09-05/16/94	4129076
Aroclor-1232	ND	150.0000	SW846 8080	05/09-05/16/94	4129076
Aroclor-1242	ND	9-050 0.031	SW846 8080	05/09-05/16/94	4129076
Aroclor-1248	ND	0.050-0.03	SW846 8080	05/09-05/16/94	4129076
Aroclor-1254	ND	0.061	SW846 8080	05/09-05/16/94	4129076
Aroclor-1260	0.23	0.061	SW846 8080	05/09-05/16/94	4129076

SURROGATE RECOVERY	±	ACCEPTABLE LIMITS		
Decachlorobiphenyl	97	(60 - 150)		
Tetrachloro-m-xylene	87	(60 - 150)		

ND NOT DETECTED AT THE STATED REPORTING LIMIT
ELEVATED DETECTION LIMITS FOR AROCLOR-1254 AND AROCLOR-1260 DUE TO
LIMITED SAMPLE VOLUME

TE: AS RECEIVED

KR-SV-34-32 TBSA #5/WHITE-FOOTED MICE 10-13-94 4:00

WO #: M4578102 DATE SAMPLED: 10/13/93
LAB #: A4D260034-027 DATE RECEIVED: 4/26/94

MATRIX: TISSUE

PARAMETER	RESULT (mg/kg)	REPORTING LIMIT	<u>METHOD</u>	EXTRACTION- ANALYSIS DATE	QC <u>BATCH</u>
Aroclor-1016	ND	_ 0.050	SW846 8080	05/09-05/16/94	4129076
Aroclor-1221	ND	0 .050 0.033	SW846 8080	05/09-05/16/94	4129076
Aroclor-1232	ND	6:050 0.033	SW846 8080	05/09-05/16/94	4129076
Aroclor-1242	ND	650.000	SW846 8080	05/09-05/16/94	4129076
Aroclor-1248	ND	0.050 0.033	SW846 8080	05/09-05/16/94	4129076
Aroclor-1254	ND	0.067	SW846 8080	05/09-05/16/94	4129076
Aroclor-1260	0.13	0.067	SW846 8080	05/09-05/16/94	4129076

SURROGATE RECOVERY	<u>\$</u>	ACCEPTABLE LIMITS
Decachlorobiphenyl	98	(60 - 150)
Tetrachloro-m-xylene	89	(60 - 150)

E: AS RECEIVED

KR-SV-38-33 TBSA #5/WHITE-FOOTED MICE 10-13-94 4:00

WO #: M4579102 DATE SAMPLED: 10/13/93 LAB #: A4D260034-028 DATE RECEIVED: 4/26/94

MATRIX: TISSUE

PARAMETER	RESULT (mq/kq)	REPORTING LIMIT ME	THOD	EXTRACTION - ANALYSIS DATE	QC <u>BATCH</u>
Aroclor-1016	ND	0.050 0.042 SW8	46 8080	05/09-05/16/94	4129076
Aroclor-1221	ND	9-050 0.042 SW8	46 8080	05/09-05/16/94	4129076
Aroclor-1232	ND	0.050 0.042 SW8	46 8080	05/09-05/16/94	4129076
Aroclor-1242	ND	0.050 O.여니고 SW8	£6 8080	05/09-05/16/94	4129076
Aroclor-1248	ND	0.050 0.042 SW8	6 8080	05/09-05/16/94	4129076
Aroclor-1254	ND	0.084 SW8	8080	05/09-05/16/94	4129076
Aroclor-1260	0.22	0.084 SW84	16 8080	05/09-05/16/94	4129076

SURROGATE RECOVERY	<u>*</u>	ACCEPTABLE LIMITS
Decachlorobiphenyl	101	(60 - 150)
Tetrachloro-m-xylene	91	(60 - 150)

E: AS RECEIVED

4/26/94

BLASLAND, BOUCK & LEE

KR-SV-44-34 TBSA #5/WHITE-FOOTED MICE 10-13-94 4:00

WO #: M4580102 DATE SAMPLED: 10/13/93 LAB #: A4D260034-029

MATRIX: TISSUE

DATE RECEIVED:

PARAMETER	RESULT (mg/kg)	REPORTING LIMIT	METHOD	EXTRACTION- ANALYSIS DATE	QC <u>BATCH</u>
Aroclor-1016	ND	0.050 0.040	SW846 8080	05/09-05/16/94	4129076
Aroclor-1221	· ND	0.050 0.040	SW846 8080	05/09-05/16/94	4129076
Aroclor-1232	ND	0.050 0.040	SW846 8080	05/09-05/16/94	4129076
Aroclor-1242	ND	0.050	SW846 8080	05/09-05/16/94	4129076
Aroclor-1248	ND	0.040	SW846 8080	05/09-05/16/94	4129076
Aroclor-1254	ND	0.081	SW846 8080	05/09-05/16/94	4129076
Aroclor-1260	0.089	0.081	SW846 8080	05/09-05/16/94	4129076

SURROGATE RECOVERY	š	ACCEPTABLE LIMITS
Decachlorobiphenyl	101	(60 - 150)
Tetrachloro-m-xylene	93	(60 - 150)

KR-SV-48-35 TBSA #5/WHITE-FOOTED MICE 10-13-94 4:00

WO #: M4581102 DATE SAMPLED: 10/13/93
LAB #: A4D260034-030 DATE RECEIVED: 4/26/94

MATRIX: TISSUE

- - - - - - GC Semi-Volatiles - - - - -

PARAMETER	RESULT (mg/kg)	REPORTING LIMIT	METHOD	EXTRACTION- ANALYSIS DATE	QC <u>BATCH</u>
Aroclor-1016	ND	0.050 .0.039	SW846 8080	05/09-05/16/94	4129076
Aroclor-1221	ND	0.050 0.039	SW846 8080	05/09-05/16/94	4129076
Aroclor-1232	ND	0-050 0.039	SW846 8080	05/09-05/16/94	4129076
Aroclor-1242	ND	0.050 0.039	SW846 8080	05/09-05/16/94	4129076
Aroclor-1248	ND	0 .050 0.039	SW846 8080	05/09-05/16/94	4129076
Aroclor-1254	ND	0.078	SW846 8080	05/09-05/16/94	4129076
Aroclor-1260	0.38	0.078	SW846 8080	05/09-05/16/94	4129076

SURROGATE RECOVERY	<u>\$</u>	ACCEPTABLE LIMITS
Decachlorobiphenyl Tetrachloro-m-xylene	9 4 89	(60 - 150) (60 - 150)

⁴ AS RECEIVED

NO NOT DETECTED AT THE STATED REPORTING LIMIT ELEVATED DETECTION LIMITS FOR ARCCLOR-1254 AND ARCCLOR-1260 DUE TO LIMITED SAMPLE VOLUME

KR-SXI-20-40 TBSA #11/WHITE-FOOTED MOUSE 10-13-94 4:00

WO #: M4582102 DATE SAMPLED: 10/13/93
LAB #: A4D260034-031 DATE RECEIVED: 4/26/94

MATRIX: TISSUE

PARAMETER	RESULT (mg/kg)	REPORTING LIMIT	METHOD	EXTRACTION- ANALYSIS DATE	QC <u>BATCH</u>
Aroclor-1016	ND	-0:050 QOLS	SW846 8080	05/09-05/16/94	4129076
Aroclor-1221	ND	0:050-0.025	SW846 8080	05/09-05/16/94	4129076
Aroclor-1232	ND	0.050 0.025	SW846 8080	05/09-05/16/94	4129076
Aroclor-1242	ND	0-050 0.025	SW846 8080	05/09-05/16/94	4129076
Aroclor-1248	ND	0.050 O. M.S	SW846 8080	05/09-05/16/94	4129076
Aroclor-1254	ND	0.050	SW846 8080	05/09-05/16/94	4129076
Aroclor-1260	ND	0.050	SW846 8080	05/09-05/16/94	4129076

SURROGATE RECOVERY	<u>*</u>	ACCEPTABLE LIMITS
Decachlorobiphenyl	89	(60 - 150)
Tetrachloro-m-xylene	84	(60 - 150)

² AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT

KR-SXI-19-41 TBSA #11/WHITE-FOOTED MOUSE 10-13-94 4:00

WO #: M4584102 DATE SAMPLED: 10/13/93 LAB #: A4D260034-032 DATE RECEIVED: 4/26/94

MATRIX: TISSUE

- - - - - - - - - - - - - - - - GC Semi-Volatiles - - - - - - - - - - - - - - - -

| PARAMETER | RESULT
(mg/kg) | REPORTING
LIMIT | METHOD | EXTRACTION-
ANALYSIS DATE | QC
BATCH |
|--------------|-------------------|------------------------|------------|------------------------------|-------------|
| Aroclor-1016 | ND | PEO.0 0.039 | SW846 8080 | 05/09-05/16/94 | 4129076 |
| Aroclor-1221 | ND | D-050 0.039 | SW846 8080 | 05/09-05/16/94 | 4129076 |
| Aroclor-1232 | ND | 0.0500.039 | SW846 8080 | 05/09-05/16/94 | 4129076 |
| Aroclor-1242 | ND | 0,050 0.039 | SW846 8080 | 05/09-05/16/94 | 4129076 |
| Aroclor-1248 | ND | 0-050-0.039 | SW846 8080 | 05/09-05/16/94 | 4129076 |
| Aroclor-1254 | ND | 0.078 | SW846 8080 | 05/09-05/16/94 | 4129076 |
| Aroclor-1260 | ND | 0.078 | SW846 8080 | 05/09-05/16/94 | 4129076 |

| SURROGATE RECOVERY | <u>*</u> | ACCEPTABLE LIMITS |
|----------------------|----------|-------------------|
| Decachlorobiphenyl | 99 | (60 - 150) |
| Tetrachloro-m-xylene | 86 | (60 - 150) |

[:] AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT
ELEVATED DETECTION LIMITS FOR AROCLOR-1254 AND AROCLOR-1260 DUE TO
LIMITED SAMPLE VOLUME

KHHI

BLASLAND, BOUCK & LEE

KR-SXI-19-53 TBSA #11/WHITE-FOOTED MOUSE 10-13-94 4:00

WO #: M4585102 DATE SAMP

DATE SAMPLED: 10/13/93

LAB #: A4D260034-033

DATE RECEIVED: 4/26/94

MATRIX: TISSUE

| PARAMETER | RESULT
(mq/kg) | REPORTING
LIMIT | METHOD | EXTRACTION -
ANALYSIS DATE | QC
<u>BATCH</u> |
|--------------|-------------------|-------------------------|------------|-------------------------------|--------------------|
| Aroclor-1016 | ND | 0.05 0 0.017 | SW846 8080 | 05/09-05/16/94 | 4129076 |
| Aroclor-1221 | ND | 0.050 0.027 | SW846 8080 | 05/09-05/16/94 | 4129076 |
| Aroclor-1232 | ND | 0.050 0.027 | SW846 8080 | 05/09-05/16/94 | 4129076 |
| Aroclor-1242 | ND | Q-050 0.027 | SW846 8080 | 05/09-05/16/94 | 4129076 |
| Aroclor-1248 | ND | D.050 0.007 | SW846 8080 | 05/09-05/16/94 | 4129076 |
| Aroclor-1254 | ND | 0.055 | SW846 8080 | 05/09-05/16/94 | 4129076 |
| Aroclor-1260 | ND | 0.055 | SW846 8080 | 05/09-05/16/94 | 4129076 |

| SURROGATE RECOVERY | Ŧ | ACCEPTABLE LIMITS |
|----------------------|----|-------------------|
| Decachlorobiphenyl | 99 | (60 - 150) |
| Tetrachloro-m-xylene | 89 | (60 - 150) |

KR-SXI-30-54 TBSA #11/WHITE-FOOTED MOUSE 10-13-94 4:00

WO #: M4586102 DATE SAMPLED: 10/13/93
LAB #: A4D260034-034 DATE RECEIVED: 4/26/94

MATRIX: TISSUE

- - - - - - - - - - - - - - - GC Semi-Volatiles - - - - - - - - - - - - - - - - -

| PARAMETER | RESULT
(mg/kg) | REPORTING
LIMIT | METHOD | EXTRACTION - ANALYSIS DATE | QC
<u>BATCH</u> |
|--------------|-------------------|-------------------------|------------|----------------------------|--------------------|
| Aroclor-1016 | ND | 8E0.0 020_0 | SW846 8080 | 05/09-05/16/94 | 4129076 |
| Aroclor-1221 | ND | 0.050 .0.03₿ | SW846 8080 | 05/09-05/16/94 | 4129076 |
| Aroclor-1232 | ND | 0.050 0.038 | SW846 8080 | 05/09-05/16/94 | 4129076 |
| Aroclor-1242 | ND | ७.050 ०.०३८ | SW846 8080 | 05/09-05/16/94 | 4129076 |
| Aroclor-1248 | ND | 0 .050 0.038 | SW846 8080 | 05/09-05/16/94 | 4129076 |
| Aroclor-1254 | ND | 0.076 | SW846 8080 | 05/09-05/16/94 | 4129076 |
| Aroclor-1260 | ND | 0.076 | SW846 8080 | 05/09-05/16/94 | 4129076 |

| SURROGATE RECOVERY | <u>*</u> | ACCEPTABLE LIMITS |
|----------------------|----------|-------------------|
| Decachlorobiphenyl | 106 | (60 - 150) |
| Tetrachloro-m-xylene | 97 | (60 - 150) |

L: AS RECEIVED

KR-SXI-50-55 TBSA #11/WHITE-FOOTED MOUSE 10-13-94 4:00

WO #: M4587102 DATE SAMPLED: 10/13/93
LAB #: A4D260034-035 DATE RECEIVED: 4/26/94

MATRIX: TISSUE

| PARAMETER | RESULT
(mg/kg) | REPORTING
LIMIT | METHOD | EXTRACTION -
ANALYSIS DATE | QC
<u>BATCH</u> |
|--------------|-------------------|-------------------------|------------|-------------------------------|--------------------|
| Aroclor-1016 | ND | 0 .050 0.033 | SW846 8080 | 05/09-05/16/94 | 4129076 |
| Aroclor-1221 | ND | १:05 0 ०.०३३ | SW846 8080 | 05/09-05/16/94 | 4129076 |
| Aroclor-1232 | ND | 0 .050 0,033 | SW846 8080 | 05/09-05/16/94 | 4129076 |
| Aroclor-1242 | ND | 0 .050 ०.०३≥ | SW846 8080 | 05/09-05/16/94 | 4129076 |
| Aroclor-1248 | ND | 0 -050 0.033 | SW846 8080 | 05/09-05/16/94 | 4129076 |
| Aroclor-1254 | ND | 0.066 | SW846 8080 | 05/09-05/16/94 | 4129076 |
| Aroclor-1260 | ND | 0.066 | SW846 8080 | 05/09-05/16/94 | 4129076 |

| SURROGATE RECOVERY | ł | ACCEPTABLE LIMITS |
|----------------------|-----|-------------------|
| Decachlorobiphenyl | 102 | (60 - 150) |
| Tetrachloro-m-xylene | 96 | (60 - 150) |

AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT
ELEVATED DETECTION LIMITS FOR AROCLOR-1254 AND AROCLOR-1260 DUE TO
LIMITED SAMPLE VOLUME

KR-SXI-64-56 TBSA #11/WHITE-FOOTED MOUSE 10-13-94 4:00

WO #: M4588102

DATE SAMPLED: 10/13/93 LAB #: A4D260034-036 DATE RECEIVED: 4/26/94

MATRIX: TISSUE

| PARAMETER | RESULT
(mg/kg) | REPORTING LIMIT | METHOD | EXTRACTION -
ANALYSIS DATE | QC
<u>BATCH</u> |
|--------------|-------------------|--------------------------|------------|-------------------------------|--------------------|
| Aroclor-1016 | ND | 0.0500.030 | SW846 8080 | 05/09-05/16/94 | 4129076 |
| Aroclor-1221 | ND | 0.050 0.030 | SW846 8080 | 05/09-05/16/94 | 4129076 |
| Aroclor-1232 | ND | 0.050 -0.030 | SW846 8080 | 05/09-05/16/94 | 4129076 |
| Aroclor-1242 | ND | 0 .050 -0.030 | SW846 8080 | 05/09-05/16/94 | 4129076 |
| Aroclor-1248 | ND | 0 ,050 0.030 | SW846 8080 | 05/09-05/16/94 | 4129076 |
| Aroclor-1254 | ND | 0.060 | SW846 8080 | 05/09-05/16/94 | 4129076 |
| Aroclor-1260 | ND | 0.060 | SW846 8080 | 05/09-05/16/94 | 4129076 |

| SURROGATE RECOVERY | <u>*</u> | ACCEPTABLE LIMITS |
|----------------------|----------|-------------------|
| Decachlorobiphenyl | 111 | (60 - 150) |
| Tetrachloro-m-xylene | 93 | (60 - 150) |

NOTE: AS RECEIVED

KR-SXI-42-67 TBSA #11/WHITE-FOOTED MOUSE 10-13-94 4:00

WO #: M4589102 DATE SAMPLED: 10/13/93
LAB #: A4D260034-037 DATE RECEIVED: 4/26/94

MATRIX: TISSUE

| <u>PARAMETER</u> | RESULT
(mg/kg) | REPORTING
LIMIT | METHOD | EXTRACTION-
ANALYSIS DATE | QC
<u>BATCH</u> |
|------------------|-------------------|-------------------------|------------|------------------------------|--------------------|
| Aroclor-1016 | ND | 0.050 0.038 | SW846 8080 | 05/09-05/16/94 | 4129076 |
| Aroclor-1221 | ND | 0.∙050 o.o38 | SW846 8080 | 05/09-05/16/94 | 4129076 |
| Aroclor-1232 | ND | 0 .050 0.038 | SW846 8080 | 05/09-05/16/94 | 4129076 |
| Aroclor-1242 | ND | 0.050 0.038 | SW846 8080 | 05/09-05/16/94 | 4129076 |
| Aroclor-1248 | ND | 0 ,050 0.038 | SW846 8080 | 05/09-05/16/94 | 4129076 |
| Aroclor-1254 | ND | 0.076 | SW846 8080 | 05/09-05/16/94 | 4129076 |
| Aroclor-1260 | ND | 0.076 | SW846 8080 | 05/09-05/16/94 | 4129076 |

| SURROGATE RECOVERY | <u>\$</u> | ACCEPTABLE LIMITS |
|----------------------|-----------|-------------------|
| Decachlorobiphenyl | 105 | (60 - 150) |
| Tetrachloro-m-xylene | 98 | (60 - 150) |

NOTE: AS RECEIVED

KR-SXI-62-69 TBSA #11/WHITE-FOOTED MOUSE 10-13-94 4:00

WO #: M4590102

DATE SAMPLED: 10/13/93 LAB #: A4D260034-038 DATE RECEIVED: 4/26/94

MATRIE: TISSUE

| PARAMETER | RESULT
(mq/kg) | REPORTING LIMIT | METHOD | EXTRACTION-
ANALYSIS DATE | QC
<u>BATCH</u> |
|--------------|-------------------|-----------------|------------|------------------------------|--------------------|
| Aroclor-1016 | ND | 0.054 | SW846 8080 | 05/09-05/16/94 | 4129076 |
| Aroclor-1221 | ND | 0.054 | SW846 8080 | 05/09-05/16/94 | 4129076 |
| Aroclor-1232 | ND | 0.054 | SW846 8080 | 05/09-05/16/94 | 4129076 |
| Aroclor-1242 | ND | 0.054 | SW846 8080 | 05/09-05/16/94 | 4129076 |
| Aroclor-1248 | ND | 0.054 | SW846 8080 | 05/09-05/16/94 | 4129076 |
| Aroclor-1254 | ND | 0.11 | SW846 8080 | 05/09-05/16/94 | 4129076 |
| Aroclor-1260 | ND | 0.11 | SW846 8080 | 05/09-05/16/94 | 4129076 |

| SURROGATE RECOVERY | <u>\$</u> | ACCEPTABLE LIMITS |
|----------------------|-----------|-------------------|
| Decachlorobiphenyl | 120 | (60 - 150) |
| Tetrachloro-m-xylene | 115 | (60 - 150) |

NOTE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT ELEVATED DETECTION LIMITS DUE TO LIMITED SAMPLE VOLUME

KR-SXI-61-70 TBSA #11/WHITE-FOOTED MOUSE 10-13-94 4:00

WO #: M4591102

DATE SAMPLED: 10/13/93 LAB #: A4D260034-039 DATE RECEIVED: 4/26/94

MATRIX: TISSUE

| PARAMETER | RESULT (mg/kg) | REPORTINGLIMIT | METHOD | EXTRACTION-
ANALYSIS DATE | QC
BATCH |
|--------------|----------------|----------------|------------|------------------------------|-------------|
| Aroclor-1016 | ND | 0.055 | SW846 8080 | 05/09-05/16/94 | 4129076 |
| Aroclor-1221 | ND | 0.055 | SW846 8080 | 05/09-05/16/94 | 4129076 |
| Aroclor-1232 | ND | 0.055 | SW846 8080 | 05/09-05/16/94 | 4129076 |
| Aroclor-1242 | ND | 0.055 | SW846 8080 | 05/09-05/16/94 | 4129076 |
| Aroclor-1248 | ND | 0.055 | SW846 8080 | 05/09-05/16/94 | 4129076 |
| Aroclor-1254 | ND | 0.11 | SW846 8080 | 05/09-05/16/94 | 4129076 |
| Aroclor-1260 | ND | 0.11 | SW846 8080 | 05/09-05/16/94 | 4129076 |

| SURROGATE RECOVERY | <u>*</u> | ACCEPTABLE LIMITS |
|----------------------|----------|-------------------|
| Decachlorobiphenyl | 103 | (60 - 150) |
| Tetrachloro-m-xylene | 94 | (60 - 150) |

NOTE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT ELEVATED DETECTION LIMITS DUE TO LIMITED SAMPLE VOLUME

KR-SXI-67-71 TBSA #11/WHITE-FOOTED MOUSE 10-13-94 4:00

WO #: M4593102

DATE SAMPLED: 10/13/93 LAB #: A4D260034-040 DATE RECEIVED: 4/26/94

MATRIX: TISSUE

| PARAMETER | RESULT (mg/kg) | REPORTING
LIMIT | METHOD | EXTRACTION-
ANALYSIS DATE | QC
<u>BATCH</u> |
|--------------|----------------|--------------------------|------------|------------------------------|--------------------|
| Aroclor-1016 | ND | 0-050.0.049 | SW846 8080 | 05/09-05/16/94 | 4129076 |
| Aroclor-1221 | ND | 0.050 0.049 | SW846 8080 | 05/09-05/16/94 | 4129076 |
| Aroclor-1232 | ND | 0.049 | SW846 8080 | 05/09-05/16/94 | 4129076 |
| Aroclor-1242 | ND | 9:0 50. 0.049 | SW846 8080 | 05/09-05/16/94 | 4129076 |
| Aroclor-1248 | ND | 2.050 0.049 | SW846 8080 | 05/09-05/16/94 | 4129076 |
| Aroclor-1254 | ND | 0.098 | SW846 8080 | 05/09-05/16/94 | 4129076 |
| Aroclor-1260 | ND | 0.098 | SW846 8080 | 05/09-05/16/94 | 4129076 |

| SURROGATE RECOVERY | <u>*</u> | ACCEPTABLE LIMITS |
|----------------------|----------|-------------------|
| Decachlorobiphenyl | 96 | (60 - 150) |
| Tetrachloro-m-xylene | 91 | (60 - 150) |

NOTE: AS RECEIVED

KR-SI-16-44 TBSA #10/WHITE-FOOTED MOUSE 10-13-94 4:00

WO #: M4594102 DATE SAMPLED: 10/13/93
LAB #: A4D260034-041 DATE RECEIVED: 4/26/94

MATRIX: TISSUE

| PARAMETER | RESULT
(mg/kg) | REPORTING
LIMIT | METHOD | EXTRACTION -
ANALYSIS DATE | QC
<u>BATCH</u> |
|--------------|-------------------|--------------------|------------|-------------------------------|--------------------|
| Aroclor-1016 | ND | 0.050 0.029 | SW846 8080 | 05/09-05/16/94 | 4129076 |
| Aroclor-1221 | ND | P50.0000 | SW846 8080 | 05/09-05/16/94 | 4129076 |
| Aroclor-1232 | ND | 0.050 0.029 | SW846 8080 | 05/09-05/16/94 | 4129076 |
| Aroclor-1242 | ND | 0.050 0.029 | SW846 8080 | 05/09-05/16/94 | 4129076 |
| Aroclor-1248 | ND | 0.0500.029 | SW846 8080 | 05/09-05/16/94 | 4129076 |
| Aroclor-1254 | ND | 0.058 | SW846 8080 | 05/09-05/16/94 | 4129076 |
| Aroclor-1260 | ND | 0.058 | SW846 8080 | 05/09-05/16/94 | 4129076 |

| SURROGATE RECOVERY | ž | ACCEPTABLE LIMITS |
|----------------------|----|-------------------|
| Decachlorobiphenyl | 98 | (60 - 150) |
| Tetrachloro-m-xylene | 88 | (60 - 150) |

NOTE: AS RECEIVED

4/26/94

DATE RECEIVED:

BLASLAND, BOUCK & LEE

KR-SX-47-45 TBSA #10/WHITE-FOOTED MOUSE 10-13-94 4:00

WO #: M4595102 DATE SAMPLED:

MATRIX: TISSUE

LAB #: A4D260034-042

| PARAMETER | RESULT (mg/kg) | REPORTING
LIMIT | METHOD | EXTRACTION -
ANALYSIS DATE | QC
<u>BATCH</u> |
|--------------|----------------|-------------------------|------------|-------------------------------|--------------------|
| Aroclor-1016 | ND | 0.050 -0.035 | SW846 8080 | 05/09-05/16/94 | 4129076 |
| Aroclor-1221 | ND | D-0500-037 | SW846 8080 | 05/09-05/16/94 | 4129076 |
| Aroclor-1232 | ND | 0.050 0 035 | SW846 8080 | 05/09-05/16/94 | 4129076 |
| Aroclor-1242 | ND | D.050 0.055 | SW846 8080 | 05/09-05/16/94 | 4129076 |
| Aroclor-1248 | ND | 0.050 0.035 | SW846 8080 | 05/09-05/16/94 | 4129076 |
| Aroclor-1254 | ND | 0.070 | SW846 8080 | 05/09-05/16/94 | 4129076 |
| Aroclor-1260 | 0.12 | 0.070 | SW846 8080 | 05/09-05/16/94 | 4129076 |

| SURROGATE RECOVERY | <u>*</u> | ACCEPTABLE LIMITS |
|----------------------|----------|-------------------|
| Decachlorobiphenyl | 108 | (60 - 150) |
| Tetrachloro-m-xylene | 95 | (60 - 150) |

NOTE: AS RECEIVED

K44047

BLASLAND, BOUCK & LEE

KR-SX-39-47 TBSA #10/WHITE-FOOTED MOUSE 10-13-94 4:00

WO #: M4596102 DATE SAMPLED: 10/13/93
LAB #: A4D260034-043 DATE RECEIVED: 4/26/94

MATRIX: TISSUE

| PARAMETER | RESULT (mg/kg) | REPORTING
LIMIT | METHOD | EXTRACTION-
ANALYSIS DATE | QC
<u>BATCH</u> |
|--------------|----------------|---------------------------|------------|------------------------------|--------------------|
| Aroclor-1016 | ND | .0.0500.032 | SW846 8080 | 05/09-05/14/94 | 4129077 |
| Aroclor-1221 | ND | - 0.05 0 0.032 | SW846 8080 | 05/09-05/14/94 | 4129077 |
| Aroclor-1232 | ND | 0 .050 -0.032 | SW846 8080 | 05/09-05/14/94 | 4129077 |
| Aroclor-1242 | ND | 9 .050 0.032 | SW846 8080 | 05/09-05/14/94 | 4129077 |
| Aroclor-1248 | ND | 0.050 ೦.೦ಽ೭ | SW846 8080 | 05/09-05/14/94 | 4129077 |
| Aroclor-1254 | ND | 0.065 | SW846 8080 | 05/09-05/14/94 | 4129077 |
| Aroclor-1260 | ND | 0.065 | SW846 8080 | 05/09-05/14/94 | 4129077 |

| SURROGATE RECOVERY | <u>*</u> | ACCEPTABLE LIMITS |
|----------------------|----------|-------------------|
| Decachlorobiphenyl | 91 | (60 - 150) |
| Tetrachloro-m-xylene | 90 | (60 - 150) |

NOTE: AS RECEIVED

KR-SX-36-48 TBSA #10/WHITE-FOOTED MOUSE 10-13-94 4:00

WO #: M4597102 DATE SAMPLED:

10/13/93 LAB #: A4D260034-044 DATE RECEIVED: 4/26/94

MATRIX: TISSUE

| PARAMETER | RESULT (mg/kg) | REPORTING LIMIT | METHOD | EXTRACTION-
ANALYSIS DATE | QC
BATCH |
|--------------|----------------|-----------------|------------|------------------------------|-------------|
| Aroclor-1016 | ND | 450.00034 | SW846 8080 | 05/09-05/14/94 | 4129077 |
| Aroclor-1221 | ND | 0.0500.034 | SW846 8080 | 05/09-05/14/94 | 4129077 |
| Aroclor-1232 | ND | PE0.00004 | SW846 8080 | 05/09-05/14/94 | 4129077 |
| Aroclor-1242 | ND | P60.0000 | SW846 8080 | 05/09-05/14/94 | 4129077 |
| Aroclor-1248 | ND | 0.050 0.034 | SW846 8080 | 05/09-05/14/94 | 4129077 |
| Aroclor-1254 | ND | 0.068 | SW846 8080 | 05/09-05/14/94 | 4129077 |
| Aroclor-1260 | 0.073 | 0.068 | SW846 8080 | 05/09-05/14/94 | 4129077 |

| SURROGATE RECOVERY | <u>*</u> | ACCEPTABLE LIMITS |
|--|----------|----------------------------|
| Decachlorobiphenyl
Tetrachloro-m-xylene | 98 | (60 - 150)
(60 - 150) |

NOTE: AS RECEIVED

KR-SX-37-49 TBSA #10/WHITE-FOOTED MOUSE 10-13-94 4:00

WO #: M4598102 DATE SAMPLED:

10/13/93 LAB #: A4D260034-045 DATE RECEIVED: 4/26/94

MATRIX: TISSUE

| PARAMETER | RESULT (mg/kg) | REPORTING
LIMIT | METHOD | EXTRACTION -
ANALYSIS DATE | QC
BATCH |
|--------------|----------------|------------------------|------------|-------------------------------|-------------|
| Aroclor-1016 | ND | 0.050 0.026 | SW846 8080 | 05/09-05/14/94 | 4129077 |
| Aroclor-1221 | ND | 0.050.0.CLL | SW846 8080 | 05/09-05/14/94 | 4129077 |
| Aroclor-1232 | ND | 2.050 ⊙.೧೭८ | SW846 8080 | 05/09-05/14/94 | 4129077 |
| Aroclor-1242 | ND | D-050 0.026 | SW846 8080 | 05/09-05/14/94 | 4129077 |
| Aroclor-1248 | ND | 0.050.0.026 | SW846 8080 | 05/09-05/14/94 | 4129077 |
| Aroclor-1254 | ND | 0.052 | SW846 8080 | 05/09-05/14/94 | 4129077 |
| Aroclor-1260 | 0.057 | 0.052 | SW846 8080 | 05/09-05/14/94 | 4129077 |

| SURROGATE RECOVERY | <u>*</u> | ACCEPTABLE LIMITS |
|----------------------|----------|-------------------|
| Decachlorobiphenyl | 100 | (60 - 150) |
| Tetrachloro-m-xylene | 93 | (60 - 150) |

NOTE: AS RECEIVED

KR-SX-33-50 TBSA #10/WHITE-FOOTED MOUSE 10-13-94 4:00

WO #: M4599102 DATE SAMPLED: 10/13/93
LAB #: A4D260034-046 DATE RECEIVED: 4/26/94

MATRIX: TISSUE

| PARAMETER | RESULT (mq/kq) | REPORTING LIMIT | METHOD | EXTRACTION-
ANALYSIS DATE | QC
<u>BATCH</u> |
|--------------|----------------|------------------------|------------|------------------------------|--------------------|
| Aroclor-1016 | ND | 140.0 0.050 | SW846 8080 | 05/09-05/14/94 | 4129077 |
| Aroclor-1221 | ND | 0.050 | SW846 8080 | 05/09-05/14/94 | 4129077 |
| Aroclor-1232 | ND | 0.0500,041 | SW846 8080 | 05/09-05/14/94 | 4129077 |
| Aroclor-1242 | ND | 0.050.0.04 (| SW846 8080 | 05/09-05/14/94 | 4129077 |
| Aroclor-1248 | ND | 0.0500.041 | SW846 8080 | 05/09-05/14/94 | 4129077 |
| Aroclor-1254 | ND | 0.082 | SW846 8080 | 05/09-05/14/94 | 4129077 |
| Aroclor-1260 | 0.11 | 0.082 | SW846 8080 | 05/09-05/14/94 | 4129077 |

| SURROGATE RECOVERY | <u>\$</u> | ACCEPTABLE LIMITS |
|----------------------|-----------|-------------------|
| Decachlorobiphenyl | 96 | (60 - 150) |
| Tetrachloro-m-xylene | 91 | (60 - 150) |

OTE: AS RECEIVED

KR-SX-29-51 TBSA #10/WHITE-FOOTED MOUSE 10-13-94 4:00

WO #: M4600102 DATE SAMPLED: 10/13/93
LAB #: A4D260034-047 DATE RECEIVED: 4/26/94

MATRIX: TISSUE

| PARAMETER | RESULT (mq/kq) | REPORTING
LIMIT | METHOD | EXTRACTION-
ANALYSIS DATE | QC
<u>BATCH</u> |
|--------------|----------------|--------------------------|------------|------------------------------|--------------------|
| Aroclor-1016 | ND | 0.032 | SW846 8080 | 05/09-05/14/94 | 4129077 |
| Aroclor-1221 | ND | 0:05 0 0,032 | SW846 8080 | 05/09-05/14/94 | 4129077 |
| Aroclor-1232 | ND | ςεο.ο 020.0 | SW846 8080 | 05/09-05/14/94 | 4129077 |
| Aroclor-1242 | ND | . 0.050 0.032 | SW846 8080 | 05/09-05/14/94 | 4129077 |
| Aroclor-1248 | ND | 0.050 0.032 | SW846 8080 | 05/09-05/14/94 | 4129077 |
| Aroclor-1254 | ND | 0.064 | SW846 8080 | 05/09-05/14/94 | 4129077 |
| Aroclor-1260 | 0.28 | 0.064 | SW846 8080 | 05/09-05/14/94 | 4129077 |

| SURROGATE RECOVERY | <u>*</u> | ACCEPTABLE LIMITS |
|----------------------|----------|-------------------|
| Decachlorobiphenyl | 96 | (60 - 150) |
| Tetrachloro-m-xylene | 90 | (60 - 150) |

OTE: AS RECEIVED

KR-SX-26-52 TBSA #10/WHITE-FOOTED MOUSE 10-13-94 4:00

WO #: M4601102

DATE SAMPLED:

10/13/93

LAB #: A4D260034-048

DATE RECEIVED:

4/26/94

MATRIX: TISSUE

- - - - - GC Semi-Volatiles - - - -

| PARAMETER | RESULT (mq/kq) | REPORTING LIMIT | METHOD | EXTRACTION-
ANALYSIS DATE | QC
BATCH |
|--------------|----------------|-------------------------|------------|------------------------------|-------------|
| Aroclor-1016 | ND | 0.050 0.030 | SW846 8080 | 05/09-05/14/94 | 4129077 |
| Aroclor-1221 | ND | 0.030 | SW846 8080 | 05/09-05/14/94 | 4129077 |
| Aroclor-1232 | ND | 0.050 0.030 | SW846 8080 | 05/09-05/14/94 | 4129077 |
| Aroclor-1242 | ND | 0-050-0.030 | SW846 8080 | 05/09-05/14/94 | 4129077 |
| Aroclor-1248 | ND | 0 .050 0.030 | SW846 8080 | 05/09-05/14/94 | 4129077 |
| Aroclor-1254 | ND | 0.059 | SW846 8080 | 05/09-05/14/94 | 4129077 |
| Aroclor-1260 | 0.13 | 0.059 | SW846 8080 | 05/09-05/14/94 | 4129077 |

| SURROGATE RECOVERY | ž | ACCEPTABLE LIMITS |
|----------------------|----|-------------------|
| Decachlorobiphenyl | 94 | (60 - 150) |
| Tetrachloro-m-xylene | 89 | (60 - 150) |

RR-SX-15-57 TBSA #10/WHITE-FOOTED MOUSE 10-13-94 4:00

AR-SA-15-57 IBSA #10/WHITE-FOUTED MOUSE 10-15-94 4:00

WO #: M4602102 DATE SAMPLED: 10/13/93
LAB #: A4D260034-049 DATE RECEIVED: 4/26/94

MATRIX: TISSUE

| PARAMETER | RESULT (mg/kg) | REPORTING
LIMIT | METHOD | EXTRACTION -
ANALYSIS DATE | QC
<u>BATCH</u> |
|--------------|----------------|------------------------|------------|-------------------------------|--------------------|
| Aroclor-1016 | ND | 0.050 0.027 | SW846 8080 | 05/09-05/14/94 | 4129077 |
| Aroclor-1221 | ND | 0.050 0.027 | SW846 8080 | 05/09-05/14/94 | 4129077 |
| Aroclor-1232 | ND | -0.050 0.027 | SW846 8080 | 05/09-05/14/94 | 4129077 |
| Aroclor-1242 | ND | 0.050 0.027 | SW846 8080 | 05/09-05/14/94 | 4129077 |
| Aroclor-1248 | ND | 0.050 0.027 | SW846 8080 | 05/09-05/14/94 | 4129077 |
| Aroclor-1254 | ND | 0.054 | SW846 8080 | 05/09-05/14/94 | 4129077 |
| Aroclor-1260 | 0.060 | 0.054 | SW846 8080 | 05/09-05/14/94 | 4129077 |

| SURROGATE RECOVERY | <u>\$</u> | ACCEPTABLE LIMITS |
|----------------------|-----------|-------------------|
| Decachlorobiphenyl | 134 | (60 - 150) |
| Tetrachloro-m-xylene | 126 | (60 - 150) |

OTE: AS RECEIVED

KR-SX-24-58 TBSA #10/WHITE-FOOTED MOUSE 10-13-94 4:00

WO #: M4603102

DATE SAMPLED:

10/13/93

LAB #: A4D260034-050

DATE RECEIVED:

4/26/94

MATRIX: TISSUE

| PARAMETER | RESULT
(mg/kg) | REPORTING
LIMIT | METHOD | EXTRACTION-
ANALYSIS DATE | QC
<u>BATCH</u> |
|--------------|-------------------|-------------------------|------------|------------------------------|--------------------|
| Aroclor-1016 | ND | 180.0 020.0 | SW846 8080 | 05/09-05/14/94 | 4129077 |
| Aroclor-1221 | ND | 0.050 0.03 ∑ | SW846 8080 | 05/09-05/14/94 | 4129077 |
| Aroclor-1232 | MD | 0.050 0.032 | SW846 8080 | 05/09-05/14/94 | 4129077 |
| Aroclor-1242 | ND | 0:050 ⊙.03∑ | SW846 8080 | 05/09-05/14/94 | 4129077 |
| Aroclor-1248 | ND | 0.050 0.037 | SW846 8080 | 05/09-05/14/94 | 4129077 |
| Aroclor-1254 | ND | 0.064 | SW846 8080 | 05/09-05/14/94 | 4129077 |
| Aroclor-1260 | ND | 0.064 | SW846 8080 | 05/09-05/14/94 | 4129077 |

| SURROGATE RECOVERY | ž | ACCEPTABLE LIMITS |
|----------------------|-----|-------------------|
| Decachlorobiphenyl | 100 | (60 - 150) |
| Tetrachloro-m-xylene | 94 | (60 - 150) |

PERCENT LIPID RESULTS

Percent Lipid Results

| Sample ID | Lab ID | Matrix | Results |
|-----------|----------|--------------------|---------|
| K44000 | M4547102 | white-footed mouse | 3.9 |
| K44001 | M4548102 | white-footed mouse | 1.7 |
| K44002 | M4549102 | white-footed mouse | 2.8 |
| K44003 | M4550102 | white-footed mouse | 3.8 |
| K44004 | M4551102 | white-footed mouse | 1.8 |
| K44005 | M4552102 | white-footed mouse | 3.6 |
| K44006 | M4553102 | white-footed mouse | 2.0 |
| K44007 | M4554102 | white-footed mouse | 1.2 |
| K44008 | M4555102 | white-footed mouse | 1.9 |
| K44009 | M4557102 | white-footed mouse | 1.0 |
| K44010 | M4559102 | white-footed mouse | 1.8 |
| K44011 | M4558102 | white-footed mouse | 0.8 |
| K44012 | M4560102 | white-footed mouse | 1.7 |
| K44013 | M4561102 | white-footed mouse | 1.0 |
| K44014 | M4562102 | white-footed mouse | 1.0 |
| K44015 | M4563102 | white-footed mouse | 0.5 |
| K44016 | M4564102 | white-footed mouse | 1.2 |
| K44017 | M4565102 | white-footed mouse | 1.2 |
| K44018 | M4572102 | white-footed mouse | 3.2 |
| K44019 | M4573102 | white-footed mouse | 2.3 |
| K44020 | M4566102 | white-footed mouse | 1.2 |
| K44021 | M4567102 | white-footed mouse | 1.4 |
| K44022 | M4568102 | white-footed mouse | 1.4 |
| K44023 | M4570102 | white-footed mouse | 1.2 |
| K44024 | M4575102 | white-footed mouse | 0.9 |
| K44025 | M4576102 | white-footed mouse | 1.1 |
| K44026 | M4578102 | white-footed mouse | 1.1 |
| K44027 | M4579102 | white-footed mouse | 0.7 |
| K44028 | M4580102 | white-footed mouse | 0.8 |

| Sample ID | Lab ID | . Matrix | Results |
|-----------|----------|--------------------|---------|
| K44029 | M4581102 | white-footed mouse | 0.8 |
| K44030 | M4582102 | white-footed mouse | 0.6 |
| K44031 | M4584102 | white-footed mouse | 3.2 |
| K44032 | M4585102 | white-footed mouse | 0.6 |
| K44033 | M4586102 | white-footed mouse | 1.8 |
| K44034 | M4587102 | white-footed mouse | 0.4 |
| K44034 | M4588102 | white-footed mouse | 1.6 |
| K44036 | M4589102 | white-footed mouse | 0.7 |
| K44037 | M4590102 | white-footed mouse | 1.2 |
| K44037 | M4591102 | white-footed mouse | 1.2 |
| K44039 | M4593102 | white-footed mouse | 1.5 |
| K44040 | M4594102 | white-footed mouse | 0.6 |
| K44041 | M4595102 | white-footed mouse | 1.4 |
| K44042 | M4596102 | white-footed mouse | 0.8 |
| K44043 | M4597102 | white-footed mouse | 0.9 |
| K44044 | M4598102 | white-footed mouse | 0.8 |
| K44045 | M4599102 | white-footed mouse | 0.8 |
| K44046 | M4600102 | white-footed mouse | 2.5 |
| K44047 | M4601102 | white-footed mouse | 0.9 |
| K44048 | M4602102 | white-footed mouse | 1.8 |
| K44049 | M4603102 | white-footed mouse | 0.6 |